THE INSTITUTIONALISATION OF SUSTAINABILITY IN COMMODITY SYSTEMS

Applying system thinking and functionalism in complex transition processes

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WORKING PAPER

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Preface

This report describes an approach 'under construction' to institutionalizing and up scaling sustainability in international commodity systems, e.g. in the trade of coffee, cocoa, tea or palm oil. Accordingly, this working paper is meant to invite a critical reading and to discuss the possibilities for testing the tools derived from the conceptual approach outlined in this working document.

Our work dovetails with various endeavours in both the public and the private sector. Our discussions have been inspired by the idea to relate the UN Millennium Development Goals to the functioning of commodity systems. We also think that our work relates to the interest for sustainability present in the work of International Commodity Organizations, such as the International Coffee Organisation (ICO), the International Cocoa Organisation (ICCO) or the International Tropical Timber Organisation (ITTO). Another point of reference is the line of action proposed by the EU Action Plan on Agricultural Commodity Chains, Dependence and Poverty. And, our work has been informed through participation in the work of the market sector on sustainability and Corporate Social Responsibility, e.g. linked to the Sustainable Agricultural Initiative (SAI), or in public-private schemes, e.g. the Common Code for the Common Community. Our interactions with other stakeholders confirmed the timeliness of considering the institutional aspects of up scaling sustainability in commodity systems.

The members of the research team gained most of their experience at different levels in the coffee chain. Perhaps, a certain bias towards the on-going developments in the coffee sector might be present in this document. The ambition of the approach, however, is to make a contribution to the installation of a transition process towards sustainable development in international commodity systems in general.

A major challenge for the research team was to translate a strongly conceptual and theoretical debate to innovative and resilient instruments applicable in real commodity chains. We believe to have the first steps in this endeavour and are looking forward to discuss the value of the approach with practitioners and policy makers in the worlds of commodities.

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1 Introduction

Purpose of this study

The purpose of this working document is to investigate the feasibility of applying concepts from system thinking and functionalism to the process of institutionalising and up scaling sustainability goals in international commodity systems.

Background

Today, the interest in sustainability is growing, both in the policy domain, e.g. Millennium Development Goals, and in the commercial domain – e.g. private standards. This report takes an interest in linking the search for sustainability with the evolving forms of governance and interaction management in international commodity systems. The relationships between and functions of different actors in international commodity systems changed over the years (Vellema et al. 2003).

Up to the late 1980s, a number of international commodity agreements tried to manage the balance between supply and demand in the commodity trade, intending to control price volatility and ensure income stability for the primary producers. This form of market regulation was abandoned in the successive era of deregulation and liberalization in the 1990s. Regulation and governance in commodity system was to a certain extend handed over to market forces; the public sector decreased its responsibilities. In this period, international coffee prices reached an historical low in 2001, confronting producers with prices below production costs. The successive era of deregulation and liberalization in the 1990s seriously altered the institutional infrastructure in commodity producing countries, in particular the technical and marketing infrastructure usually managed by (para)statal institutions in producing countries.

From the late 1990s a variety of stakeholders (trade, industry, producers' associations, non-governmental organizations and public sector) actively participated in the implementation of codes of conduct or standards with the intention to enhance performance in terms of sustainability, product quality and risk aversion by ensuring continuity in the supply (Jansen et al. 2003). This meant a shift from an entirely deregulated market towards market-led governance through (private) standards and the establishment of long-term relationships between buyers and suppliers.

The above indicates that sustainability goals have been added to the existing, more straightforward, business transactions in international commodity systems. It can be expected that in the coming years, producers' organisations and international trade and industry, possibly in tandem with government agencies, will seek new forms of regulation both to cope with the capricious situation in international commodity markets, to enhance quality of product and sustainability of the production processes and to ensure continuity in the supply base of agricultural commodities.

Consequently, the question raised here is what this implies for the relationships between different actors and how these relationships can be managed in accordance with a common goal. The basic assumption of this working document is that to make sustainability policies or standards work lasting institutional and organisational transformations are required. The precise institutionalisation of sustainability initiatives will differ for different locations. In general, however, it will benefit from an institutional framework functional to linking distributed competencies, which are essential achieve common goals. The current business models and modes of governance will not automatically lead to such a functional framework.

This still needs fine-tuning between different stakes and interests as well as experimenting with innovative institutional solutions. The research team responsible for this working document decided to build on systems thinking and functionalism to develop an approach supportive of policy frameworks for sustainability in international commodity markets and the implementation of codes of conduct.

Approach

By relating sustainability goals to the functioning of international commodity systems, five institutional concerns come to the fore.

1) Firstly, the scale of commodity systems and, in many cases, the involvement of large numbers of farmers create specific institutional challenges for including a wide variety of actors in institutionalising and up scaling the transition processes towards sustainable development.
2) Secondly, the multiple interactions between stakeholders have a wider scope than mere business transactions in a linear supply chain; it seems to be more appropriate to look at commodity systems composed by a varied set of functions, i.e. purposeful actions.
3) Thirdly, perceiving sustainability as a common goal also implies that new forms of governance combine commercial interests with the management of public goods (such as biodiversity, water resource management, social welfare etc) on different scales and on different levels. Accordingly, unwillingness to cooperate or to create coherency among actors might hamper establishing sustainability in commodity systems.
4) Fourthly, an unintended consequence of deregulation policies is the disappearance of certain functions indispensable for establishing sustainability. Activities that previously belonged to the public area are left to market forces, which in turn may lead to "blind spots" for long-term (sustainability) goals.
5) Finally, when making an improvement process operational, it may become clear that establishing sustainability in all its facets is difficult to realize as an individual actor, which implies interdependencies with others to achieve the common goal of sustainability.

These issues can be summarised in two sets of questions:

1. What functions contribute to the transformation of commodity systems to sustainable commodity systems?
    a. What functions are present?
    b. What functions are absent?
    c. The absence of what function might jeopardise the transformation to sustainability?
    d. What are the functions managing leverage points in the transition process?
    e. What functions are essential for establishing sustainability?

2. What are the mechanisms relating these functions in a coherent way in the context of a commodity system?
    a. What are feed-back and control mechanisms present in the commodity system?
    b. What are coordination mechanisms in the commodity system?
    c. What are the organisational forms performing functions?
    d. How is coherency arranged in the specific institutional architecture of the commodity system?

The formulation of these questions is strongly grounded in system thinking and functionalism. Essential for this approach is that functions are disconnected from the actual actors, i.e. organisational forms, responsible for these actions. Another important aspect of the approach is that the system composed by a set of functions aims to reach a certain level of stability through feed-back, control and coordination.

System thinking was considered relevant because establishing sustainability relies on interactions between various elements of a larger system – the whole is larger than the sum of its parts. This is particularly important since a successful improvement process may require joint investments, exchange of knowledge and joint learning. These are tasks (or functions) that are additional to the classic business functions apparent in a commodity chain, i.e. production, processing, trading or purchasing.

The related notion of functions, which can be performed by different organisational forms, was introduced to enable an open-minded dialogue in which stakeholders can set aside their institutionally imposed roles to look at "the things that have to be done" for the sake of sustainable development. Functions are tasks that serve a specific goal. Some functions are crucial for reaching the overall goal, in our case sustainability. With the introduction of the concept of a function we hope to provide methods to facilitate the analysis of commodity chains and to identify new functions that are necessary for a certain envisaged change. Once consensus is reached on required functions the most appropriate institutions to perform the task can be identified, which, obviously, depends on the specific socio-economic and cultural conditions in a location, region or country. We furthermore might discern blind spots: tasks that are not implemented by any actor but are nevertheless indispensable for reaching a common goal.

For example, to avoid contamination of the soil with pesticides under a coffee crop while sustaining income, a farmer needs to receive information on possible alternatives to pesticide use, and how this will affect production costs and benefits and his long term market position. He also will need to acquire new skills. Information exchange, provision of funds, capacity building, and the implementation of production methods are examples of *functions*, which are required to reach the common goal: sustainable production. Obviously, the farmer is unable to perform all these functions and., thus, depends on relationships with others.

Another example is the conversion of a coffee farm from conventional production to certified organic production. Before the transition the farmer receives advice from government extension officers, credit from a bank, and a premium from the buyer. After transition, a branch organization provides advice or a commercial consultancy, a family member gives a loan, and a marketing organization achieves better prices through more efficient negotiating. In this example, the system (environmental friendly coffee production) as well as the functions remain the same (information exchange, finance provision, etc), but the actors

performing the functions have changed (family versus a bank, government extension officers versus branch organization). This requires different institutional arrangements.

Hence, key to this approach is that form follows function. The functionalist approach looks at "*why*" (purpose) and "*what*" (function) before considering "*how*" (structures) or "*who*" (actors). We expect such an approach to shed new light on a number of issues:

- Awareness of stakeholders on how they form part of a larger system and how they interrelate and influence their environment;
- Identification of blind spots in activities to be undertaken in order to achieve common goals;
- New ways of organization or institutional arrangements to achieve these goals, developed independent from vested interests or political positions;
- New modes coordination between distributed competencies in transition processes;
- New ways of linking tasks to the specific expertise and competence of actors rather than a situation where 'everybody is doing everything';
- Possible new ways to share responsibilities between public and private domains.

Reading guide

This working document assembles both the theoretical and the practical components of the overall approach. It is divided in two parts. Part 1 describes the conceptual pillars of system thinking and functionalism from the perspective of institutionalising sustainability in international commodity systems. This introductory chapter introduced the rationale of the approach. Next, chapter 2 explains the theoretical concepts in which the approach to institutionalisation and up scaling is grounded. Chapter 3 describes how the conceptual approach can lead to actual applications and introduces the scope and possible impact of two tools.

Part 2 presents two tools as annexes to the conceptual approach. These tools address the institutional aspects related to a transition towards sustainability. Annex 1 introduces the contours of a protocol for a participatory strategising process with actors in cross-border and multi-layered commodity systems. This first tool is supports multi-stakeholder dialogues that help actors to detect essential functions for sustainable development and to assist actors to attribute functions to the various actors.

The second tool, described in more detail in Annex 2, has 2 functions. Firstly, it assists individual actors to make an institutional assessment of their own position and capacity in the context of transition and to examine their relationships with other actors involved in this transformation process. Secondly, it provides methods to identify focus points for collective action (or leverage points). Focussing activities on these leverage points helps to use scarce resources as effective as possible.

2 Concepts

Introduction

Before we can explain the developed tools we need to elaborate on some crucial theoretical aspects of system thinking and functionalism (for references see section 4). In this chapter we will introduce the definitions and concepts of a system, a function, control and feed back mechanisms, and emergent properties. These are the 4 elements that have informed the development of the tools described in the annexes.

System thinking

Systems thinking can be seen as a reaction against the reductionism in more conventional, linear thinking. Table 1 shows some differences between system thinking and conventional thinking. Applying system thinking broadens the dominant view that perceives supply chains as a sequential order of primarily technical tasks. System thinking locates a supply chain in its environment and emphasis feed-back and control mechanisms to explain stability and change in a commodity system.

Table 1: Differences between systems thinking and conventional thinking

Systems Thinking	**Linear Thinking**
Open minded, unstructured with no direction	Linear direction, logical step by step.
Captures all variety of ideas	Follows ideas related to causes and effects.
Inclusive of all stakeholders points of view	One dominant perspective or point of view.
Recognize importance of feedback both positive and negative	Feedback not recognized.
Thinking holistic in different levels of complexity	Specialisms studying parts of the whole

Systems

Definition

Systems are defined as:

- an arrangement of (physical) components related in such a way that they act as a whole;
- a configuration where the properties of the whole arise from the relationships between the component parts;
- a self-sustaining whole with a specific purpose.

In this study we see supply chains as a system because (i) the various actors in a commodity chain (components) work together as a whole; (ii) the relations between the chain parties

(components) define the chain itself (the whole), and (iii) the chain has a specific purpose (producing goods and bringing these to the end-consumer, all under certain conditions, and with a common goal, i.e. sustainability) and is self-sustaining.

Banathy (2004) distinguishes two main types of systems: natural systems and designed systems. Natural systems are usually biological, living systems, such as the human body or the solar system. Designed systems are usually man-made creations, such as products of physical engineering (e.g. a car) and conceptual systems (e.g. mathematics). A human activity system is also an example of a designed system, and is defined as a set of activities (relationships) carried out by people who select and organise these activities to obtain a purpose. Human activity systems range from families and small groups (organised for a purpose) to organisations, communities and nations.

Hence, commodity chains are organised activities with a purpose, carried out by people and therefore *supply chains can be regard as human activity systems*. In the context of commodity chains, the purpose of human activity systems varies, depending on negotiations between and social action of stakeholders. The following purposes can be thought of:

- To stabilize prices by regulating supply and demand (ICA)
- To enhance sustainability by monitoring performance
- To make trade fair by setting minimum incomes
- To secure public health (laws and regulations on food safety, Maximum Residue Limits)
- To earn a decent living or to allocate risks
- To create social welfare

The boundary of a system

A difficult matter is where to place the boundary between a system and its environment (Heylighen, 1998). Deciding upon the exact location of the boundaries of a system, and thus to decide what is part of a system and what is not, is not always straightforward. The boundary of a system is defined by the scope of the improvement process and the overall (common) goal pursued. For example, coffee farmers in Vietnam that want to enhance sustainability performance in their production may need to involve the national government with respect to land tenure rights or regional government for arranging training. By doing this these governments becomes part and parcel of the system and boundaries have changed. Defining what we believe forms part of the system, and what forms part of the environment, also depends on the perspective of the person that defines the system, because systems are clearly a human conceptualisation. They do not exist independently of the observer. Not in all cases there is agreement within the group of actors on the boundaries of a system.

> We use the concept of a system to emphasize that commodity chains are more than a mere series of business transactions. A system is guided by a certain purpose, and tries to maintain a certain level of stability to move towards this purpose. This explains our interest in the way different functions constitute the larger whole.

Functions within systems

Systems are usually composed of interdependent functions (Fig. 1) that operate at a lower hierarchal level. These functions or sub-systems interrelate and are mutually interdependent. They are indispensable for the functioning of the system itself, because it serves a specific sub-goal that constitutes the purposeful action of the whole. The relation between functions within one system is governed by a set of regulatory or coordinating functions. A function

always has an input, a transformation and an output (Fig. 1). So a function is an entity that transforms inputs into outputs, changing the state of something into something else.

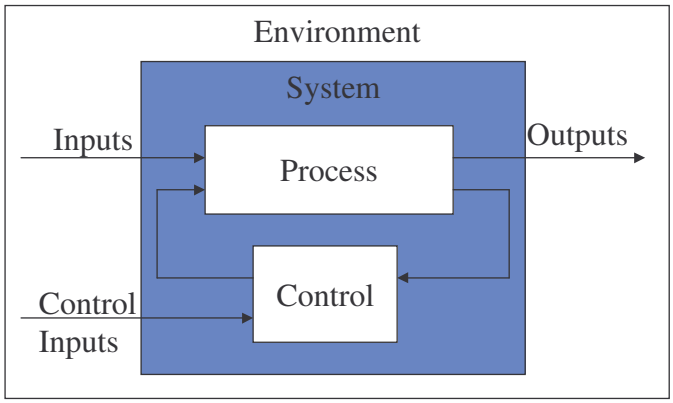

Fig. 1: Concept of a system with functions and control mechanisms (Beynon-Davies, 2004)

What happens when we apply the concepts of system and functions to a supply chain?

An example of a function is the production of coffee berries form soil, water, nutrients, labour, etc. The system is a coffee farm; the function is defined as 'production of coffee berries'. Flows between functions can occur in the form of finances, information or goods, which are subject to regulatory measures. System thinking implies that the output and sustainability of a system is determined by its functions rather then its actors. This also implies that the parts are replaceable as long as the functions remain fulfilled. Or it means that if we change the functions the output can or will be changed. In a commodity chain this implies that actors are replaceable as long as what they do or did (their function) is taken over by someone else or that when we change their functions the output of the system will be changed.

Therefore a logical step is to first define all important functions within the system, without taking into account the current actors and their respective responsibilities. To give some guidance to the identification of functions, we propose to use three categories: (1) value adding functions, (2) enabling or stimulating functions and (3) coordinating or regulating functions.

> We use the term function to start from the actual transformation process rather than from the organisation or actor performing a task. We are looking for a way to sketch the contours of a functioning whole. With the purpose the enhance sustainability performance in commodity chains. Who is doing what strongly depends on the specific socio-economic and institutional conditions. However, what has to be done can de defined in more generic terms.

Control and feed back mechanisms

A system is supposed to have a certain level of stability, which it achieves through control and feed back mechanisms. A viable system, following the definition of the Oxford English Dictionary, is a system that is able to maintain a separate identity or existence and that is able to survive in a particular environment. Viability is achieved through a combination of controlling performance and taking corrective measures. Control is the process by which a

system adapts to changes in its environment and ensures continuity over time. Control is the process by which a system ensures continuity through time. It is thus the means by which system identity is sustained and the system maintains its viability in terms of changes in its environment. One of the implicit assumptions when dealing with mechanisms of regulation is that by means of implementing specific measures, we can create a new balance in a whole.

Two types of control can be distinguished: regulation and adaptation. The typical connotations of the term control are stability and conservation. This side of control is frequently referred to as regulation. *Regulation* is the conservative side of control and ensures that a system will recover stability after a period of disturbance. Regulation correlates with internal processes of a system. *Adaptation* is the second form of control. Through adaptation a system is able to adapt to changes in its environment, striving for a proper match between the system and its environment. This is embedded in the principle of organising – how order is created out of chaos. This Adaptation is correlated with the relationships between the system and its environment.

Open systems, such as commodity chains, normally adapt to changes in their external environments. For instance, in ecological science the concept of open systems is used to explain adaptations by animals and plants to changes in the physical environment. All functions have a control mechanism that regulates the behaviour of that function (Fig. 1). Control mechanisms use control inputs which will normally be in the form of decision rules or a decision strategy. These rules or strategies are initially supplied to the control mechanism from outside of the system and are used to steer a system in a desired direction by supplying control signals to the function under control.

The mode of control and regulation in a system depends on the type of feed back mechanisms. Two forms of feedback exist: positive and negative feedback, and a system can achieve viability by using both types of control mechanisms (Wilson and Morren, 1990).

Negative feedback

Negative feedback (Fig. 2) stimulates a function to counteract any deviation from its original form. An example of negative feedback is the way the Netherlands are coping with flood hazard by reinforcing dikes. In this case the system (Dutch society) responded to an information flow by combating any deviation from the original status. Negative feedback restores conditions to a tolerable range (Molly Young Brown, 2002). An example of negative feedback in commodity chains is the International Commodity Agreements to regulate supply and stabilize prices.

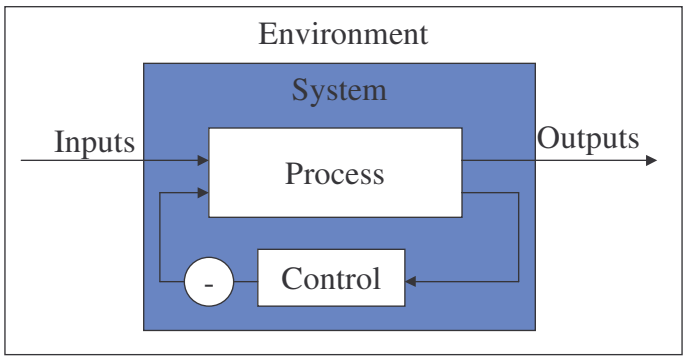

Figure 2: Concept of a function with a negative feedback mechanism (Beynon-Davies, 2004)

Positive feedback

Positive feedback (Fig. 3) stimulates the function to increase any deviation from its original status; the function gets into a vicious circle (negative) or virtuous circle (positive). An example of a (vicious) positive feedback is a situation where crop yields decline as a result of soil erosion, farmers receive less income, and will be less willing to invest in soil and water conservation measures. As a result of this, soil erosion will accelerate.

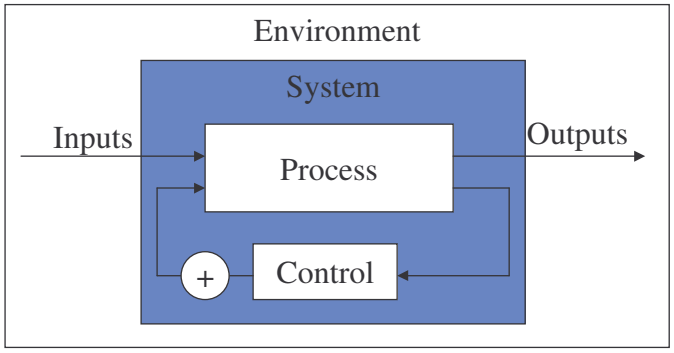

Figure ***3: Positive Feedback (Beynon-Davies, 2004)***

Without feedback mechanisms a system would be unable to adapt to changing conditions in the environment and eventually cease to exist. Positive and negative feedback mechanisms operate together in systems. While adapting to changing conditions through positive feedback all living systems maintain themselves through negative feedback, and reduce deviation around new response patterns as soon as possible. If a system would only have positive feedback mechanisms, it would have no integrity because it would not be able to maintain a certain status.

What if we apply these concepts to supply chains?

Codes of conduct are typical examples of positive feedback mechanisms, as they aim at redirecting the system towards sustainability. Control can be viewed in terms of a monitoring sub-system that regulates the behaviour of other sub-systems (Wilson and Morren, 1990). This monitoring or control sub-system ensures defined levels of performance for the system through imposing a number of control inputs upon the system. Such control inputs will normally be in the form of decision rules or a decision strategy. The rules are initially supplied to the control sub-system from outside of the system and are used to steer a system in a desired direction by supplying control signals to the process of the system (figure 1).

Regulatory functions manage the flows between different functions. Typical examples of regulatory functions are decisions on who has access to market information, who is trained in certain crop management techniques, how are profits fairly distributed over the chain partners. These functions do not transform inputs in outputs, but regulate the importance and intensity of other functions within the system.

> We look at feed back mechanisms to establish where and how the system is controlling and correcting its performance. This offers the opportunity to identify leverage points for the desired change and to be able to address the root causes of a problem rather than its symptoms. This may enhance the acceptance of controls and rules in a system because the actors see that

the system is moving into the right direction. The idea of just control procedures may strengthen the commitment to the long term goal, e.g. sustainability with regard to People Planet Profit, and encourage the changing of behaviour and rules present in a system.

Emergent Properties

The core idea of system thinking is that "a whole is more than the sum of its parts". This extra result (on top of the regular output of the all individual functions) that emerges out of the interaction of functions is called an emergent property. These emergent properties cannot be predicted, even when there is full understanding of the parts, nor can we derive the character of emergent property because the parts alone do not demonstrate any of it. So, a system is a complex entity that has properties which do not belong to any of its constituent parts, but emerge from the relationships or interaction of its constituent parts.

An example is that of the bicycle. The chain, the pedals, the tires, etc are the subsystems of the system of a bicycle. The inputs are all the materials, the output is the bicycle. The property that emerges out of this is that the vehicle can ride. Would the studying of the chain or the pedals or any other part suggest that the interactions of the parts would have such a fantastic outcome? It would not. What makes the bike to ride is the interaction between its parts and how they are organised. If the wrong parts are screwed together, they would interact, but due to poor organisation, the bicycle would still not be able to ride.

How do we apply this concept to supply chains?

Emergent properties in human activity systems depend upon the interactions between people and thus are difficult to predict or control. The growth of trust and confidence among colleague farmers is an example of an emergent property. So are the (lack of) experience with hedging and competition among traders. Also the stubbornness or flexibility of the technological or material aspects of a system can be considered as an emergent property.

Over the last decades the relations between actors in commodity chains are changing. From very short-term brokerage interactions, relations have developed and are still developing into relations that are based on a long-term view and are marked by increased reliability and trust. These latter values are emergent properties that result from the interaction between the actors within the system. Emergent properties can not be steered directly, but some indirect ways to have influence on the emergence of these properties are: providing the right boundary conditions (e.g. in the form of sufficient information), connecting the right functions in the right way, choose the right actors.

We introduced the term emergent properties to underline that eventually systems and functions are part of human behaviour and social action. A possible fallacy of a pure system and function-based approach is the denial of social relationships and uncertainty. This suggests that constructing a sustainable supply chain benefits from a process manager who facilitates, acts as a catalyst, mediates between various partners, or manages alliances. It would be insufficient to rely solely on 'natural' feed back mechanisms for the system's survival in long-term perspective. Robust social interactions are important to make the system function as a purposeful whole.

3 Towards an application of system thinking and functionalisms: two tools

Introduction

In chapter 1 we observed that the contemporary modes of governance in commodity systems tend towards a growing emphasis on a kind of social agreements based on the shares idea of sustainability. Establishing sustainability in the international and large scale commodity systems is an enormous challenge arising from this shift in governance. Enhancing sustainability performance in commodity systems may require a new ordering of current functions, new control and feed back mechanisms, or the introduction of entirely new functions whose absence might jeopardize the shared goal. The approach developed in this working document offers a way to map functions and to assess where intervention can be most effective.

The aim is to inform an open-minded discussion on how to up scale and institutionalise sustainability initiatives in mainstream commodity systems. The assumption is that the use of the tools is preceded by multi-stakeholders processes reaching a social agreement on the development direction, e.g. sustainability, and the rules of the game, e.g. a fair and decent commercial environment with shared responsibilities. The defined 'mission statement' of a commodity system now needs to be translated into a strategic personnel plan, including the essential functions, the modes of cooperation and coordination, and the recognition of the points to push the lever in the right direction. For this purpose, the conceptual approach introduced in chapter 2 has been translated into two tools, which can be used in complex transition processes in commodity systems: (1) a protocol for stakeholder dialogue and (2) an institutional assessment tool. The tools primarily address the institutional aspects of establishing sustainability in commodity systems.

Mission statement

Common goal	→ Sustainability / Strategy Fit
System/strategy	→ Codes / Representation / Rules of the game

Strategic personnel plan

Functions	→ Multi-stakeholder dialogue protocol
Cooperation	→ Multi-stakeholder dialogue protocol
Coordination	→ Multi-stakeholder dialogue protocol

Intervention strategy and interaction management

Leverage points	→ Institutional Assessment tool
Relational strategies	→ Institutional Assessment tool

Protocol for stakeholder dialogue

The rationale for this protocol, explained in Annex 1, is that inter-organizational or cross-functional teams or alliances can be expected to play a vital role in the desired improvement process towards sustainability. The protocol tries to establish what functions are necessary to let the system, the whole, work and what functions are essential to realise the desired change in the system. It pays special attention to enabling and coordinating functions, which are indirectly related to the core business functions. Probably, this will affect the rules of the system, e.g. credibility and representation, as well as the mechanisms for selecting preferred practices, e.g. learning and auditing. It also leads to strategic questions on, for example, how to link required competencies or how to ensure that actors are performing functions tailored to their capacities. Only towards the end of the protocol, the organisational forms performing tasks are introduced.

The protocol for multi-stakeholder dialogue proposes a process in which actors try to:

- Detect essential functions for sustainable development;
- Examine the connection between functions;
- To identify who cares for what;
- Define the possible role of a coordinating agent in the transition process;
- To outline the architecture of a functional system tailored specific conditions and strategic priorities.

Institutional assessment tool

The level of ambition reflected in the improvement process towards a sustainable commodity sector is high. Hence, an individual action or intervention might not be the most effective endeavour. Joint efforts might be necessary to turn the lever, so that an action or intervention has an effect on different aspects or at different levels in the transition. This implies that actors engaged with the process of sustainable development may benefit from the identification of leverage points, so that the use of scarce resources can be as effective as possible. The identification of leverage points can be informed by a thorough understanding of existing feed back loops in the system. Identifying leverage points as focus point for collective action also helps coordination efforts between the different competencies and capacities attached to these leverage points. The institutional assessment tool (annex 2) provides a systematic approach to identify the existing capacities for managing leverage points and to assess relationships with other actors needed to roll out the transformation process.

In sum, the institutional assessment tool aims to:

- Identify leverage points and scales of intervention in order to change practices and behaviour in the system in an effective and acceptable way;
- Assess ways managing relationships between actors, as achieving sustainability in commodity chains is a difficult task for an individual actor as it is likely to exceed their capacity;
- Reveal information flows and support networking opportunities supportive of learning, as improvement processes may require the combination of individual competencies.

4 Literature used

This working paper combines several bodies of literature. The objective of the paper, however, is not to present a systematic literature review. The idea was to translate insights and concepts from theoretical literature to an approach viable for application in real commodity systems. The references below have inspired this process.

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Annex 1 Protocol for stakeholder dialogue: mapping functions and drafting an institutional architecture in transition processes

1. Introduction

The proposed protocol for a constructive dialogue between stakeholders in and around commodity systems aims to support strategic decision making of and linkage building by change agents who are committed to the establishment of sustainability. The approach maps functions and responsibilities in the current commodity chains and identifies what functions will be needed to enhance sustainability. There are two recurring themes in the workshop: the "system-oriented" part, when functions are related to purposes for the sake of a planned transition process, and the "actor-oriented" part, when functions and tasks (responsibilities) are assigned to institutions / structures and the agenda for future action is set among the stakeholders involved.

In the functionalist approach, emphasis lies on feed back mechanisms and transformation process, which make the system work. Mapping functions and controls helps to understand what is needed to make the system adapt to the new demands in the environment, i.e. sustainability. The first step is to establish what is needed to achieve a common goal. These frames of reference will be useful to reach a shared description of a perceived real-world social system. Such a mental image can also form a representation of a future system that we create by design (Banathy, 2005). The second step is to sketch the organisational form or the institutional architecture in which this can take place.

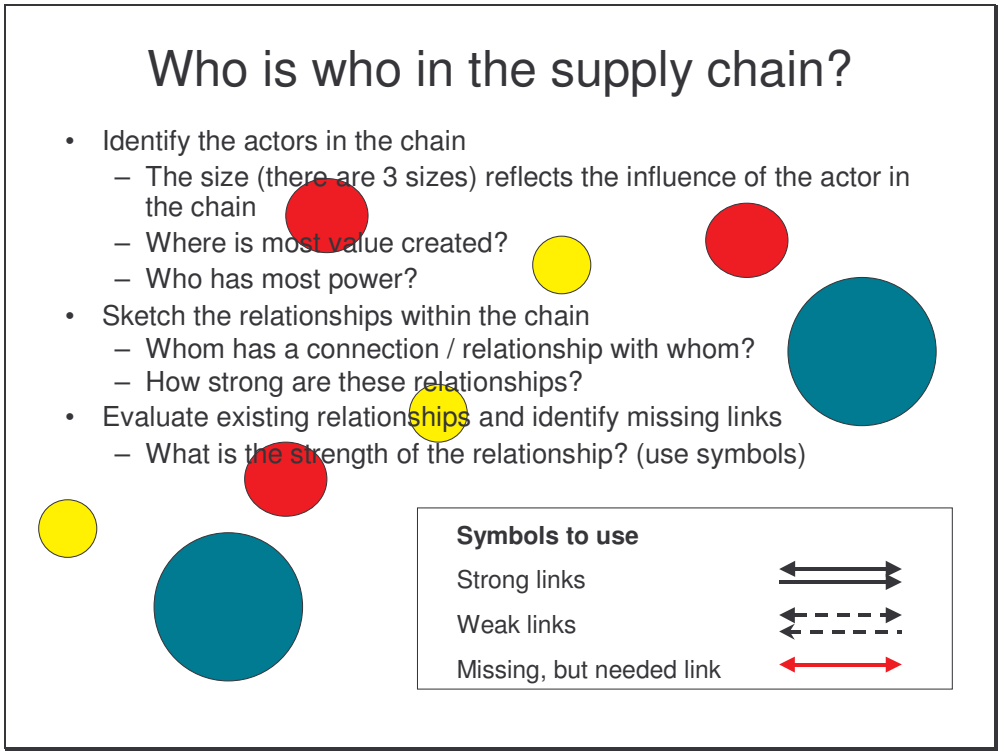
It is important to realize that naming functions is not a value free exercise. Participants will name functions according to their perceived interests and with the aim to achieve some level of control. Furthermore, goals cannot be formulated without simultaneous consideration of their feasibility in terms of available means (human and material resources) and risks / benefits for the actors. The "stake" of the initiator of the workshop will have to correspond with the interests of the participants (no "hidden" agendas). Those stakeholders for which the agenda has high urgency can be expected to be motivated to join in. However, the protocol and the institutional assessment tool particularly address issues that are important but that may have a long-term perspective and require a long breath.

In the protocol, the following steps are taken:

- Who is who in the supply chain?
- What is the value of a functionalist approach?
- What functions exist in the coffee chain?
- What functions are essential for sustainable development?
- What additional functions are needed for sustainable development?

In the pages below, these steps are described in more detail by explaining objectives and procedures.

2. Who is who in the supply chain?



Objective:

To get an idea about how the participants perceive the architecture, the roles and the relations in the supply chain.

To allow participants to identify and evaluate their views on the relationships in the chain.

To understand that the architecture, the roles and the relations in chain can be perceived differently dependant on the position of the one drawing the picture of the supply chain.

Procedure:

Three different sizes of paper circles will represent members in the supply chain networks; the bigger the size, the more power the member has. Markers are used to point out existing relationships among members one-way / two-way arrows depending on the relationship. Missing, but very much needed relationships are drawn in red. Make groups according to position in chain: (a) production, (b) processing, (c) shipping & export, import, (e) support.

3. What is the value of a functionalist approach?

Source picture: http://www.marc-hendrikx.be/sportief/jupiler/verslagen/opstelling_genk_sp20.gif

Objective:

Participants get to understand that in the face of the things that occur in the coffee chain it might be useful to learn a new approach (the one of functional thinking) to study the same issue but come to different results. We draw an analogy with a completely different system but that also needs to deal with the re-shuffling of functions with a certain aim and strategy.

Procedure:

In the coffee sector actors are dependant on each other, everybody has their own tasks but the success of one is also-dependant on the performance of the others in the chain. In fact you could compare the system of the coffee chain with the system of a soccer-team, in which the players are also dependant on one another and the performance of the team as a whole depends on the collaboration and the strategies chosen.

Explanation: The soccer-team

In a soccer team players always play according to a certain system, players always have specific task and everybody has some common ones. There is a same soccer team that has been playing with the same players for years and have been coached by the same coach. Since a while now, the team has not been performing very well, they are losing many matches lately.

The coach decides he want to continue with the same players, but he want to change strategy and adopt a new system, with the aim **to win.** He tells his players about his decision and everybody agrees with him. They all feel the same, they all want to win and feel pleasure and satisfaction again.

The coach wants to have a discussion with the whole team about how they can become a winning team again and about what everybody can contribute to this. However during this the discussion the players start to argue over how to reach that goal. Players have different points of view and ideas and people are blaming each other for previous failures. Some are scared about their own position and take on a defensive attitude; others are also scared but become offensive. Instead of working out a solution, the discussion in the plenary session turns out to be an emotional drama. The discussion becomes blurry because the players are not talking about facts or needs of the team, but about their own interests and feelings.

What could the coach and the players have done to get more information about what is going on in the team and to talk about facts?

They could have started of by identifying what a winning team is and what things are needed for a winning team, loose from their own situation. This of course can be difficult, because people are involved and they care and therefore they tend to make things personal, but by making an abstract overview over what is needed: what tasks and functions and strategy, they together avoid that things become personal and allow them to come to some facts. This gives the players something more objective to talk about.

After having this abstract picture clear another map can be made of the functions and tasks that are available in the team. This gives an overview of what is lacking from current situation to become ideal. Ultimately the task and functions might need to be reshuffled and the team needs to work out who is going to do what. This might still be an emotional happening but this time there are some facts to fall back to.

What can we learn from this example?

- A goal needs to be defined (we must be a winning team)
- There must be a strategy (e.g playing with 2 or 3 frontline players)
- Functions can be defined to get an idea of what is happening already and what is needed still
- How can the team cooperate and execute the functions that are needed

4. What functions exist in this coffee chain?

A Function

- A function is always an action/ a transformation.
- Functions exist on many levels→ for this exercise we need the level of the chain.
- A function can be unique or can exist many times in a chain
- A function can work well or not well
- A function always has a feedback mechanism

What functions exist <u>now</u> in the coffee chain of Uganda coffee?

Value generating functions	Enabling/ Stimulating functions	Coordinating functions
To do To achieve To complete etc	To encourage To stimulate etc	To fix/ to repair To control To make it work To keep an eye on etc

Objective:

To brainstorm about what functions exist in the coffee chain. This should be done in a plenary session because 1) this way the facilitator can make sure that the functions are formulated at the level of the chain, 2) all actors will need to work with the same functions in the exercises that follow

To make the shift from the example to the current situation in the coffee sector in Uganda. The goal and the strategy are already defined, but what the strategy exactly will look like is still not completely clear because the functions and the cooperation are not defined yet. The objective of this phase in the workshop is to make clear and stimulate participants that we need to define functions and think about cooperation in order reach the goal according to the strategy.

Procedure:

The brainstorm will be in a plenary session. The level of the functions needs to be that of the chain level. The functions are categorized in to three categories to make it easier for the participants to get an idea. Below some examples of functions in the different categories are given, but it will be most interesting to let the participants as free as possible within the boundaries of the definition. The guidance of the facilitator will probably depend somehow on the openness and sense of safety that the participants will experience. If it is "safe" people will feel free to talk and the process does not need much control. But if people feel less free, another strategy is needed to make the voice of everybody heard. In a few steps:

Participants write down six functions (two in each category) on post-it's. Emphasize that the organizational form of a function varies, depending on the specific situation

Together all functions are observed again and if some are missing people can add them.

Does everybody agree?

Value generating functions:	**Enabling functions:**	**Coordinating functions:**
- production	- giving credit	- accountancy
- transport	- extension services	- standards setting
- trade	- market intelligence	- inspections& certification
- wholesale		- juridical regulations
- retail		- exchange market

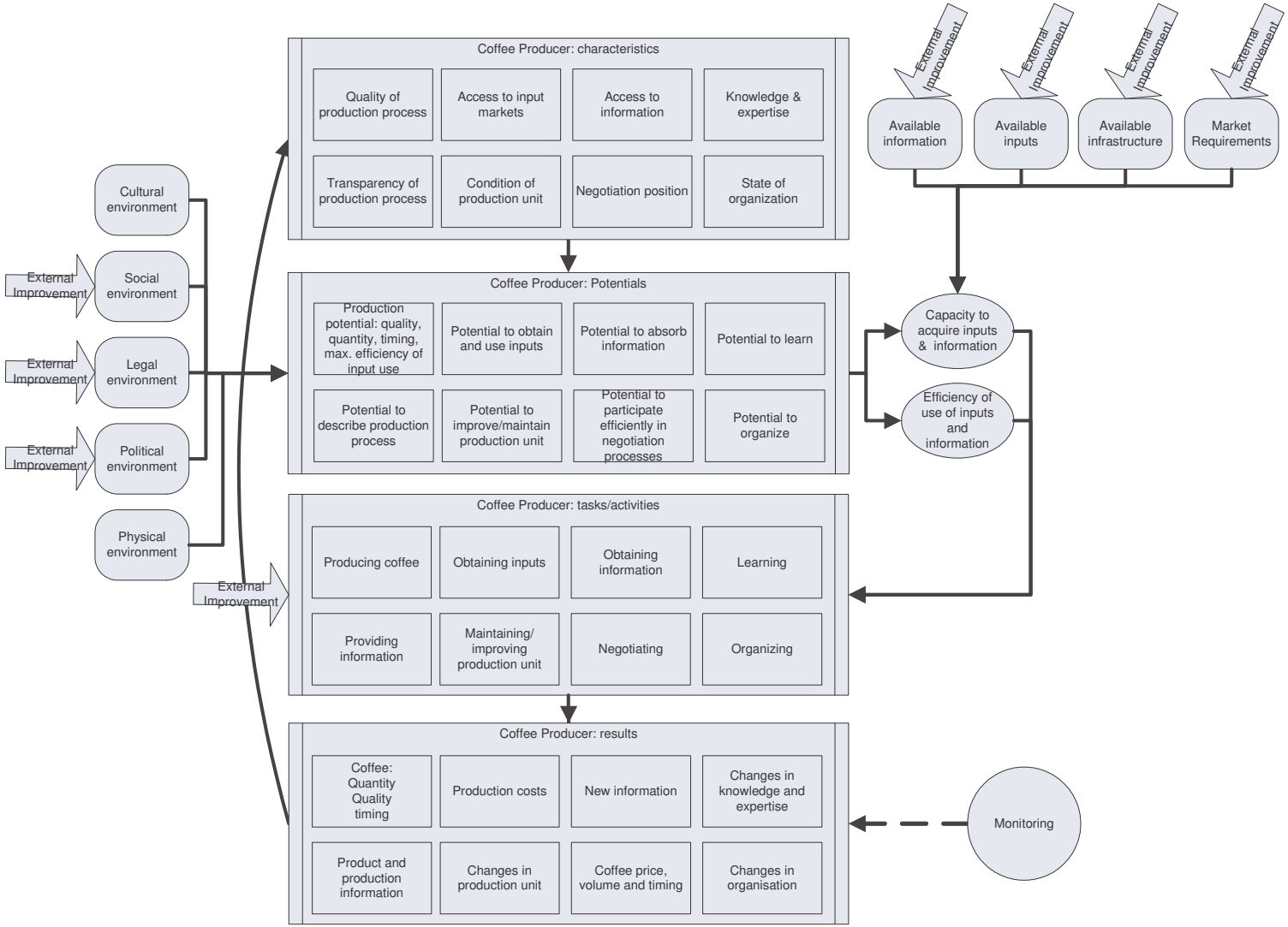
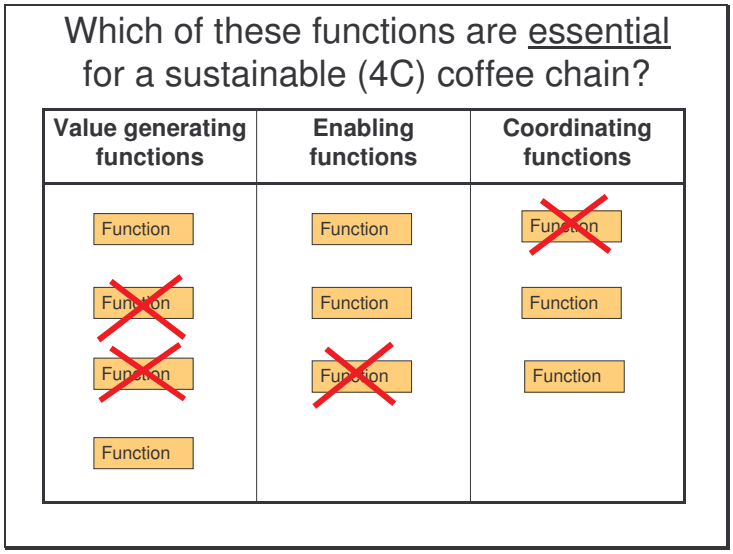


Figure 1: Example of the mapping of function in a coffee chain

5. Which of these functions are essential for sustainable development?



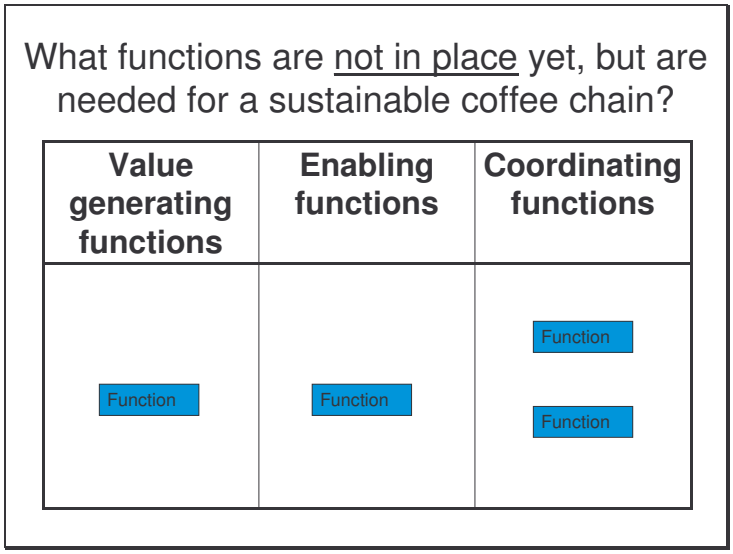
Objective:

Select the functions in each category that are essential and filter out the non-essential functions that are needed in order to have a sustainable coffee chain. The outcome may well be that all functions are considered to be essential by the different groups

Procedure:

Divide the group into three groups (vertical or horizontal) based on the background/expertise of the participants. The forming of horizontal or vertical groups depends on the situation. If the atmosphere is good and participants feel free and safe to speak whatever they want, it is most valuable to form vertical groups. However if participants feel less free to speak their minds because of power differences through the chain it is advisable to form horizontal groups.

6. What additional functions are needed for sustainable development?



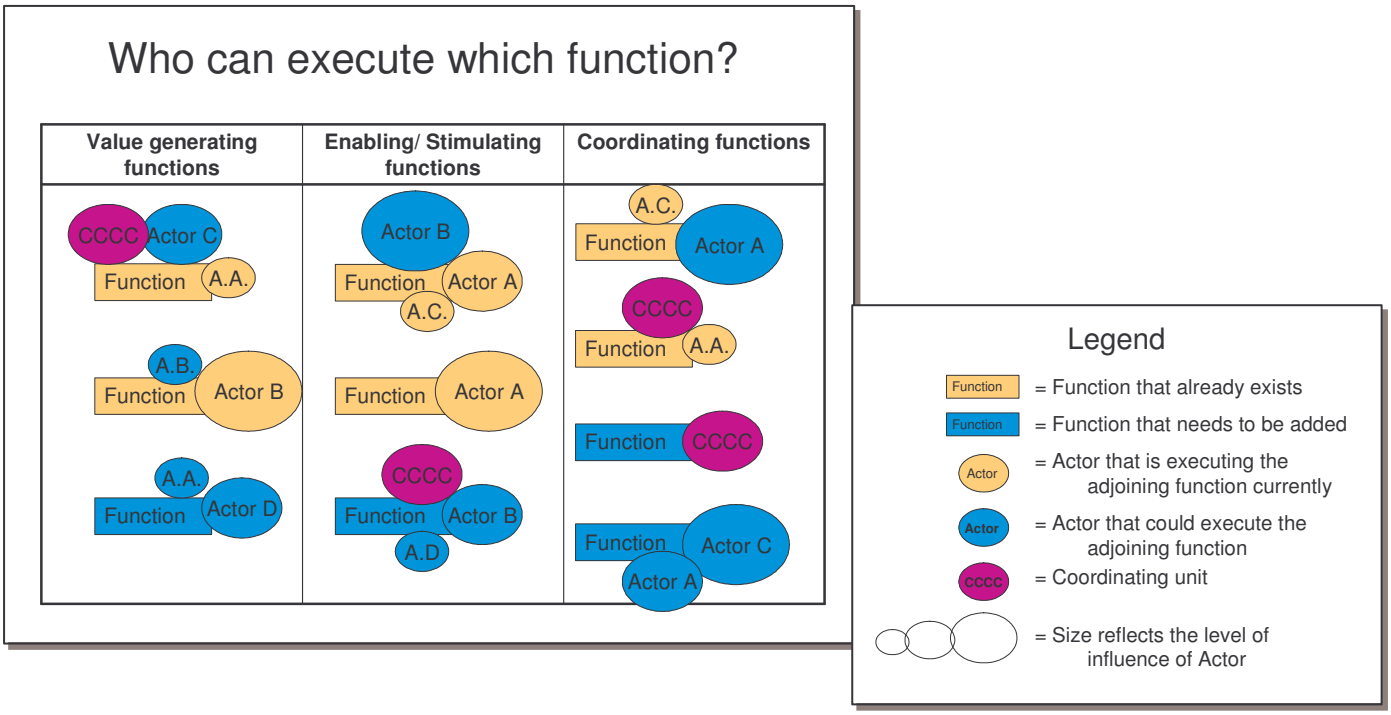
Objective:

Define functions that are not there yet and that are needed in order to have a sustainable coffee chain

Procedure:

Explain the purpose of the exercise. Continue with the groups that were formed at the previous exercise

7. Who can execute which function?



Objective:

Give an overview of the selected function that already do exist (Yellow boxes) + the functions that are not in place yet (Blue boxes) and link these to actors.

Procedure:

Continue with the groups that were formed at the previous exercise

First the actors (yellow) that already perform the **existing functions** (yellow) can be stuck to those functions. It is possible that more actors are performing that one function. It is also possible that the subgroups feel that the existing function could well be executed by a different actor (blue). Another possibility is that the function is already performed by an actor however the subgroup feels that the (to be) 4C unit (purple circles) could perform this same function too, or *should* perform this function. The size of the circles representing actors reflects the influence of that actor in that specific function; Actor A might have a lot of influence in one function and little influence in another.

Second focus on the new functions and evaluate which of the actors could best perform this new function. These questions are a guideline:

1) What skills/ experience does the actor need to have for executing this function?
2) What capacity does the actor need to have?
3) How should the actor be related to other actors?
4) What influence does the actor need to have?

Annex 2 Institutional Assessment Tool: Searching for strategies to manage leverage points in commodity systems

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1. Introduction

In this section, you will find the ingredients of an institutional assessment tool tailored to the continuous improvement process towards sustainability in commodity chains, in particular the coffee chain. The tool helps to come to grips with institutional aspects of this transition process. It informs strategic positioning and the building of partnerships between stakeholders involved in the coffee sector. And it is supports identifying actions for linking your own work to the collective endeavour to alter the situation in the coffee sector.

Commodity sectors are increasingly putting the notion of sustainable development into practice and strategy. In the coffee sector, for example, trade and industry, producers' associations and non-governmental organizations assembled to draft a Common Code for the Coffee Community, building on a number of complementary codes and standards, which all give an indication of the direction of an improvement process. Moreover, the attention to sustainability is also reflected in a growing market demand for coffee that can be identified as sustainable coffee.

The demand for sustainable commodities goes together with long standing dynamics in international markets, in particular volatile prices due to changing balances between supply and demand, and in national commodity sectors, in particular the pressure on public institutes involved in production, processing and trade. This combination poses a great institutional challenge for actors desiring to establish sustainability in commodity systems. For example, establishing sustainability in all its facets is difficult to realize as an individual actor. Hence, you may have to rely on others to achieve the common goal of sustainability. Or, a successful improvement process may require relationships that enable joint investments or exchange of knowledge.

A conclusion from the above is that it may be worthwhile to assess both your own position and capacity in the context of a process of continuous improvement towards sustainability in the coffee chain in relation to other actors involved in this collective process.

2. Users and use

The institutional assessment tool is designed for persons in leading and strategic positions in the coffee sector, capable to design and manage a desired change. The tool is meant to assist decision makers in outlining a strategic orientation and choosing partnerships and alliances in the context of establishing sustainability in the coffee chain. Managers of coffee cooperatives, exporters and traders, leaders of producers' associations, program leaders in research institutes, senior policy makers in government departments, purchasing officers of coffee companies, or coordinators of development organizations are expected to benefit from working with this tool.

The tool is designed to help you or your organization reflect on complex issues brought forwards to this ambitious change process taking place. Institutional assessment includes a form of institutional mapping your own work by looking into issues such as your proximity to leverage points in the change process, the nature and value of your relationships with other stakeholders partaking in this process, and your possibilities to acquire new knowledge as to change current practices. The institutional assessment tool can be used independently by yourself, with other members of your organization. It informs your strategic perspective in relation to the institutional aspects of establishing sustainability and to positioning your own capacity to that of (potential) partners. In addition, a precise understanding of your organizational capacity and that of your (future) partners is a useful asset when designing a robust institutional architecture for progress and development in the coffee sector.

3. Focus

Identifying your leverage point (Phase A):

The improvement process towards sustainability takes place in different locations and at different levels in the coffee sector. This makes actually establishing sustainability a difficult task, for which determining the most effective point to bring about change is important. Such a point is referred as a leverage point. At a leverage point you can expect the use of resources or the implementation of changes to have to largest effect. An example of a leverage point can be 'employment during the high season'. In this case, the tool helps you in finding out what to do to avoid employment problems during the high seasons.

Usually people know intuitively where leverage points are. But experiences show that often everyone is trying to push very hard in the wrong direction. Oftentimes, we choose to act upon symptoms in stead dealing with more structural root causes of problems. To look for *leverage points* it is better not to look near the symptoms of your problem but to go upstream. Sometimes it is best to do nothing and letting the system makes its own corrections. Other times the highest leverage is found in a complete unexpected source and you need to deepen your thinking to ferret out the root cause. Box 1 shows experiences where to look for in a business to find leverage points with the highest effectiveness (Meadows, 1999).

Regarding the places where leverage points can be found in box 1, we can say that in the case of *individually* used, this tool helps to find and analyze those leverage points that relate to 'positive' and 'negative feed back loops', 'information flows', 'rules of the system' and 'power issues'. In case various stakeholders use the tool together, it can enhance learning and action on '(changing) the goals of the business system' and '(changing) the mind set out which the system arises'. Phase A of the tool assist you in identifying your main leverage point in your business.

Box 1:	Places where to look for to find leverage points in order to intervene in a business system (in increasing order of effectiveness) (Meadows, 1999)
12.	Constants and parameters such as subsidies, taxes, standards
11.	The sizes of buffers and the stabilizing stocks
10.	The structure of material stocks and flows (e.g., transport networks, population ages structures)
9.	Lengths of a delay that consequences or problems are felt (interventions can focus on reducing delays)
8.	Negative feed back loops (interventions focus on strengthen negative feed back loops to improve a system's self correcting abilities e.g., monitoring systems to report on environmental damage integrated pest management to encounter natural pest predators of crop pests)
7.	The gain of positive feed back loops (Positive feed back loop is self reinforcing and will destroy itself in the end). Interventions focus on reducing the gain of positive feed back loops
6.	The structure of information flows (who does and who does not have access to what kind of information)
5.	The rules of the system (such as incentives, punishments, who has decision making rights)
4.	Power to act, change, evolve and self organize
3.	The goals of a system (increase market share, sustainability in coffee chain)
2.	The mindset or paradigm out which the system (goals, structure, delays) arises
1.	The power to transcend paradigms

Strategies to improve your position and capability for managing your leverage point (Phase B).

Establishing sustainability is not always a feasible task for an individual actor; it can exceed your own capacity. Apparently, an improvement process may require the combination of individual competencies and collaboration between you and others actors. This implies that your relationships with others are an important asset in the transition process. These relationships can have a different nature, for example long-term relationships focusing on partnership or arm's length relationships related to transactions and negotiations.

Phase B of the tool focuses on questions such as: "Who are important actors in relation to your leverage point"? How do you value your relationships with these actors? What relationships do you miss? Who are very influential actors for your leverage point? How can you increase the influence on your leverage point? What information do I need for the management of my leverage point? With whom do I have to build a relationship in order to obtain the information I am lacking at the moment?

4. Basic principles

The tool design is based on the following principles

- Although the tool can be used by groups, it is predominantly designed for self-assessment facilitating discovery learning and strengthening the user's own negotiation capacity on institutional issues. The tool combines the present and future thinking. It includes an analysis of the user's current institutional position in a wider setting and his/her capacity to influence as well as the search for strategies for improvement.
- Consequently the tool design is action- oriented. It assists systematically in searching strategies to improve participation in the change process towards a sustainable coffee

chain. The recurring figure 1 below favours the search for action strategies in which we define sustainability in the coffee chain as overall goal according the common goal, for example set by the Common Code for the Coffee Community.

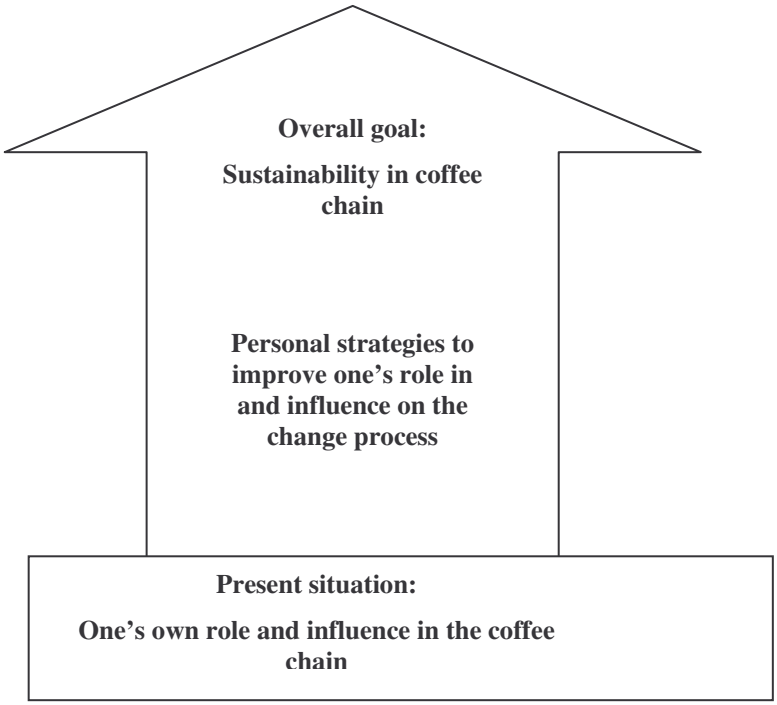


Figure 1: Finding out strategies for improving one's role in the change process towards sustainability in the coffee chain

- The tool makes use of various existing methods and methodologies such as Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) (Engel @ Salomon, 1997) and Stakeholder Analysis (ODA, 1995);
- The tool is informed by 'systems theory'. System thinking is about looking at relationships between entities (e.g., organizations), the entities themselves and the environment that surrounds the particular system under observation. So "system thinking" is "contextual" thinking. To understand systems in this special way literally means to put them into a context, to establish the nature of their relationships with a larger whole. Some people also call this holistic thinking (see figure 2).

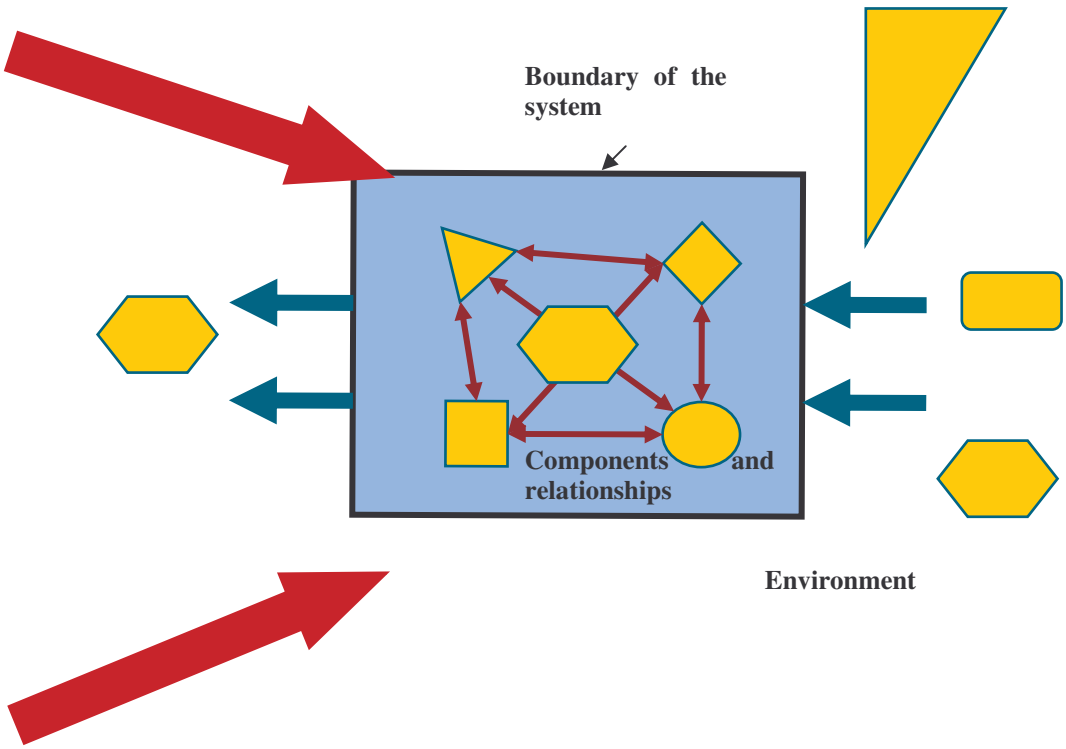


Figure 2: Systems Thinking

5. Use of the institutional assessment tool

This chapter describes the use the institutional assessment tool. The use of the tool encompasses two phases. Phase A guides you stepwise in identifying your most important leverage point. Experiences show that leverage point management requires particular relationships and information. Therefore, phase B diagnoses this leverage point from a relational perspective and form the point of view of information needs. As such it assists you to asses your relationships with others in the change process as to find out what new partnership you can develop and what (new) types of information you need.

Phase A: Identifying your main leverage point

A leverage point is a serious problem in your working process, however not every problem in your business is a leverage point. A leverage point in your business is that particular aspect where the smallest efforts can make the biggest differences. We assume that coffee chain management towards sustainability can take place through coming to grips and managing leverage points Leverage points are places in your e.g., production, processing packaging or transport system where a small shift can produce big changes in everything. When such a critical aspect is taken care off, it will effectively reduce problems afterwards. So it means it can make a real difference when you are (or you become more) able control/handle your leverage points in coffee chain process. Usually people know intuitively where leverage points are. But experiences show that we often too busy dealing with the daily symptoms of our problem rather than we treat its structural causes. Pest problems in coffee can be treated by using more pesticides. However, breeding pest resistant seedlings can be a better and more structural solution to provide co\fee growers with healthy and strong seedlings. Noteworthy is that different stakeholders can have different leverage points for the same sustainability criterion. For example, in the 4Cs policy there is the principle that 'seasonal and piece rate workers are equitable treated'. A national union can focus on a leverage point such as "legislation seasonal work" whereas a plantation owner will place emphasis on "guaranteeing sufficient labour during the high season".

Phase A of the assessment tool assists you in identifying your main leverage point in the current situation. Central questions and steps to be addressed in phase A are:

Central questions in phase A:

- **What is your major problem in your working process and why do you have this problem?**
- **Tell your story on the problem from a loop perspective and formulate for the first time your major leverage point in your working process.**
- **What are environmental factors that influence your leverage point?**
- **Formulate for the second time your major leverage point in your working process.**

To address these questions, the following techniques, described in the following, can be used:

- Root causes and consequences
- Identifying your leverage point
- Environmental influences

Technique "Root causes and consequences"

What is your major problem in your working process and why do you have this problem?

Validity

To identify a leverage point, people often look near the symptoms of their problem. This technique helps you to ferret out the root causes of your problem in such a way that it makes you looking at the interrelationship of seemingly random (problematic) events. Your leverage points can be found at the root causes of your problem.

Steps and questions

1. What is your problem?
2. Make a list of characters and assumed causes of your problem by asking your self questions such as"
3. Draw 3-5 graphs for most important causes of your problem and look at trends and future consequences of the causes
4. Describe again your most important problem in your working process and compare it with your first problem statement.

Step 1: What is your problem?

Finish the sentence *"my problem in my work process is……e.g. decrease in coffee production* **……** *.."*

Noteworthy is that:

- It should be a genuine chronic problem with a limited scope
- It should be a problem whose history is know to you so that you can describe it
- Don't jump into the conclusion already such as "the problem is we need a computer"

Step 2: *Make a list of characters and assumed causes of your problem by asking your self questions such as"*

- What are *your* assumptions on root causes and consequences?
- What are *other people's* assumptions on root causes and consequences?
- What is your role in the causes of the problem?

Document your responses by means of filling out table 2.

Table 1: Assumed causes and consequences of the problem

My assumptions on roots and consequences for my main problem	**What are other people's assumptions on the root causes and consequences for my problem?**	**What is your role in the causes of your problem?**

Step 3. *Draw 3-5 graphs for most important causes of your problem and accompany it with a few words (see examples below)*

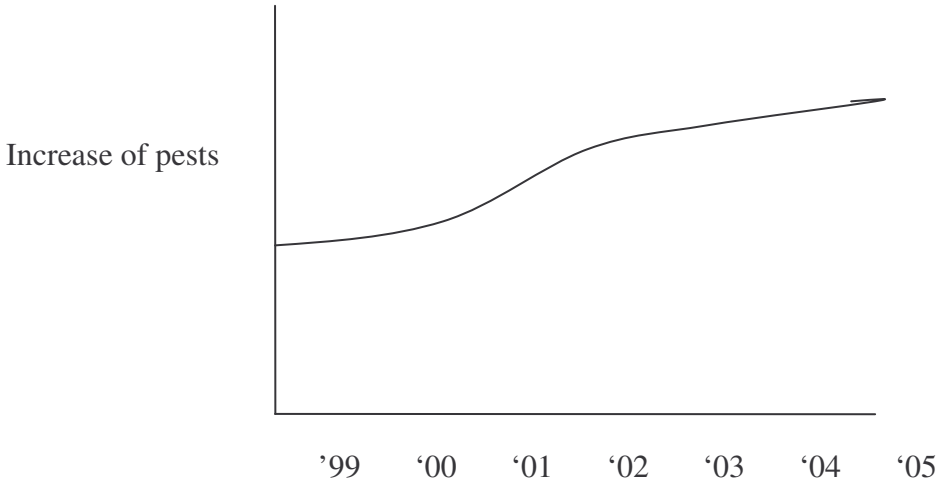


Figure 3: Increase of pests as root cause of a low coffee production

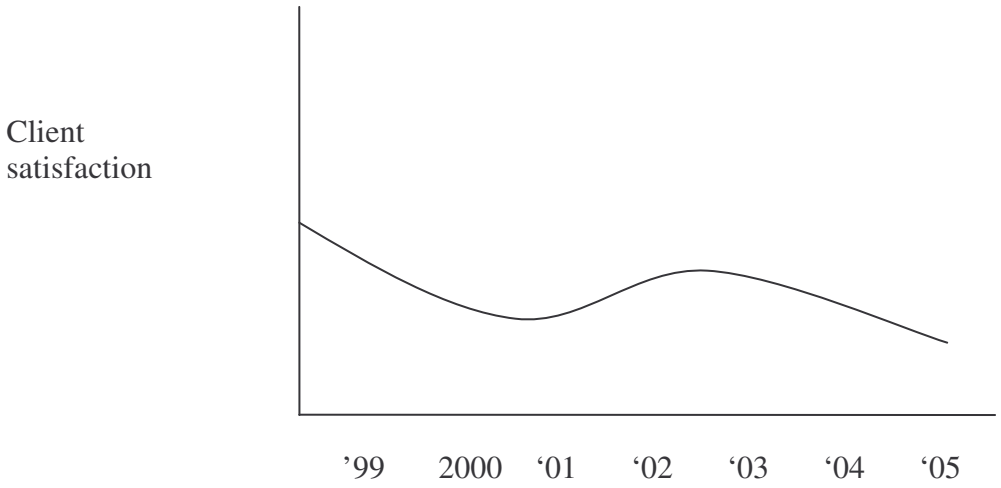


Figure 4: Poor client satisfaction as root cause for low coffee production

For each graph ask yourself questions such as:

- Does the trend go back a few months or a few years? ……..

  ……..

- What will happen in future if the trend continues to occur?

……..

……..

- Do the graphs relate to each other and if yes how?

……..

……..

Step 4. *Describe again your most important problem in your working process and compare it with your first problem statement.*

"*My problem in my work process is…….. …… ..*"

Your (new) problem statement probably:

- Is a root cause of the problem you have formulated at the start of this exercise;
- Will have negative consequences for your coffee business at the long term.

Synthesis: **What is my major problem in my working process and why do I have this problem (figure 5)?**

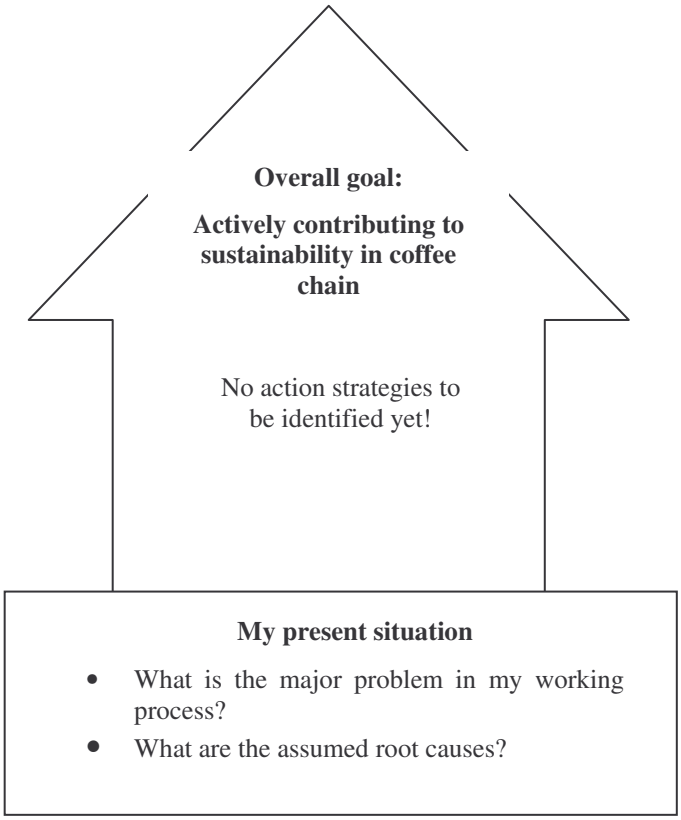


Figure 5: **What is my major problem in my working process and why do I have this problem?**

Technique "Identifying your leverage point":

Describe your story on the problem from a loop perspective and formulate for the first time your major leverage point in your working process

Validity

The next step towards identifying your leverage point is a further diagnosis of the root causes and consequences by drawing loops showing their relationships. These loops can be *reinforcing loops* or *balancing*.

A reinforcing loop (or positive feed back loop) is self-reinforcing (see figure 6 for an example). The more it works the more it gains power to work some more. The more money you have on the bank, the more interest you earn, the more money you have on the bank. This is an example having a positive impact on you. However, a negative scenario is also possible. Lower soil fertility causes a decrease in coffee production. A lower coffee production makes you earning less money, which means you have less money to buy fertilizers which again will decrease the soil fertility. This is example of a reinforcing loop is a so called 'undesirable or negative scenario'. Reinforcing loops with a negative scenario hide leverage points and call for intervention.

Interventions such as introducing mixed cropping or looking for pest resistance coffee trees might be worthwhile to invest in as it will reduce pests attack. A cost benefit analysis will show whether such investments are worthwhile to undertake or not.

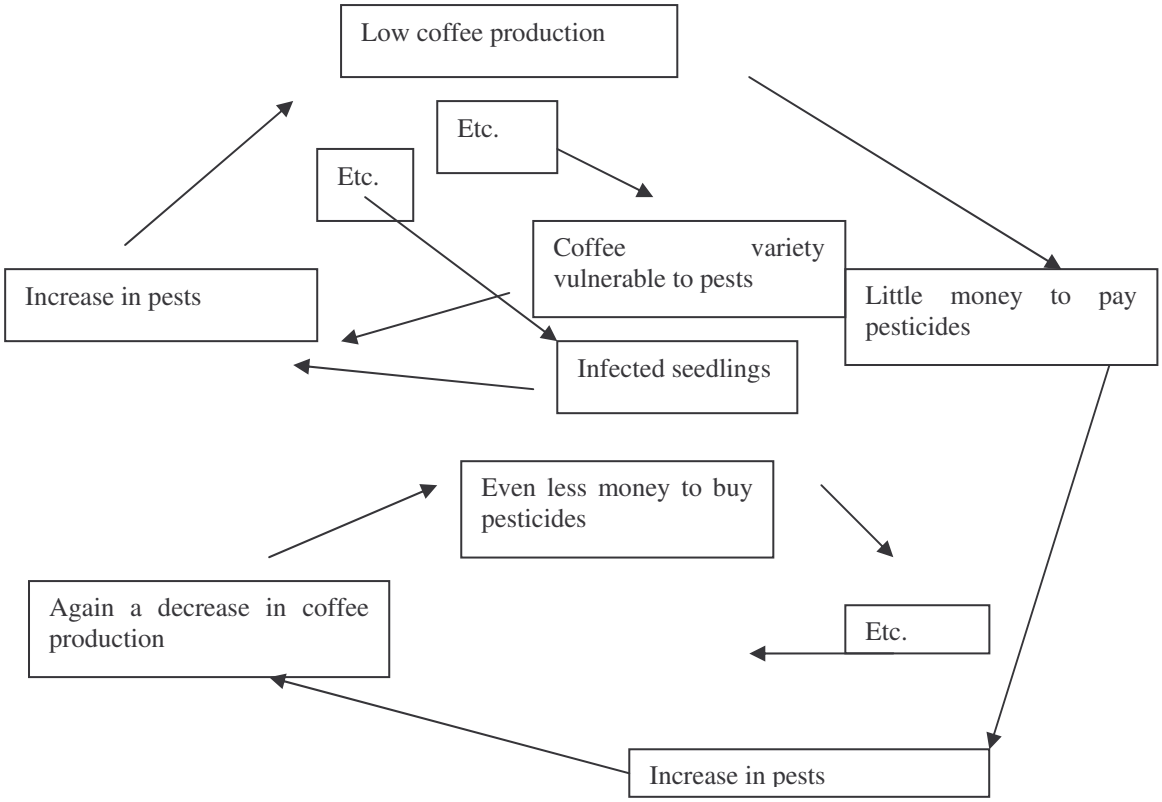


Figure 6: Example of a reinforcing loop with a negative scenario

A balancing loop (or negative feed back loop) is a self-correcting loop (see figure 7 for an example). A thermostat loop is the classic example. The purpose is to keep the room temperature fairly constant at a desired level. This might work well until you open the window that makes the self- correcting mechanism to fail.

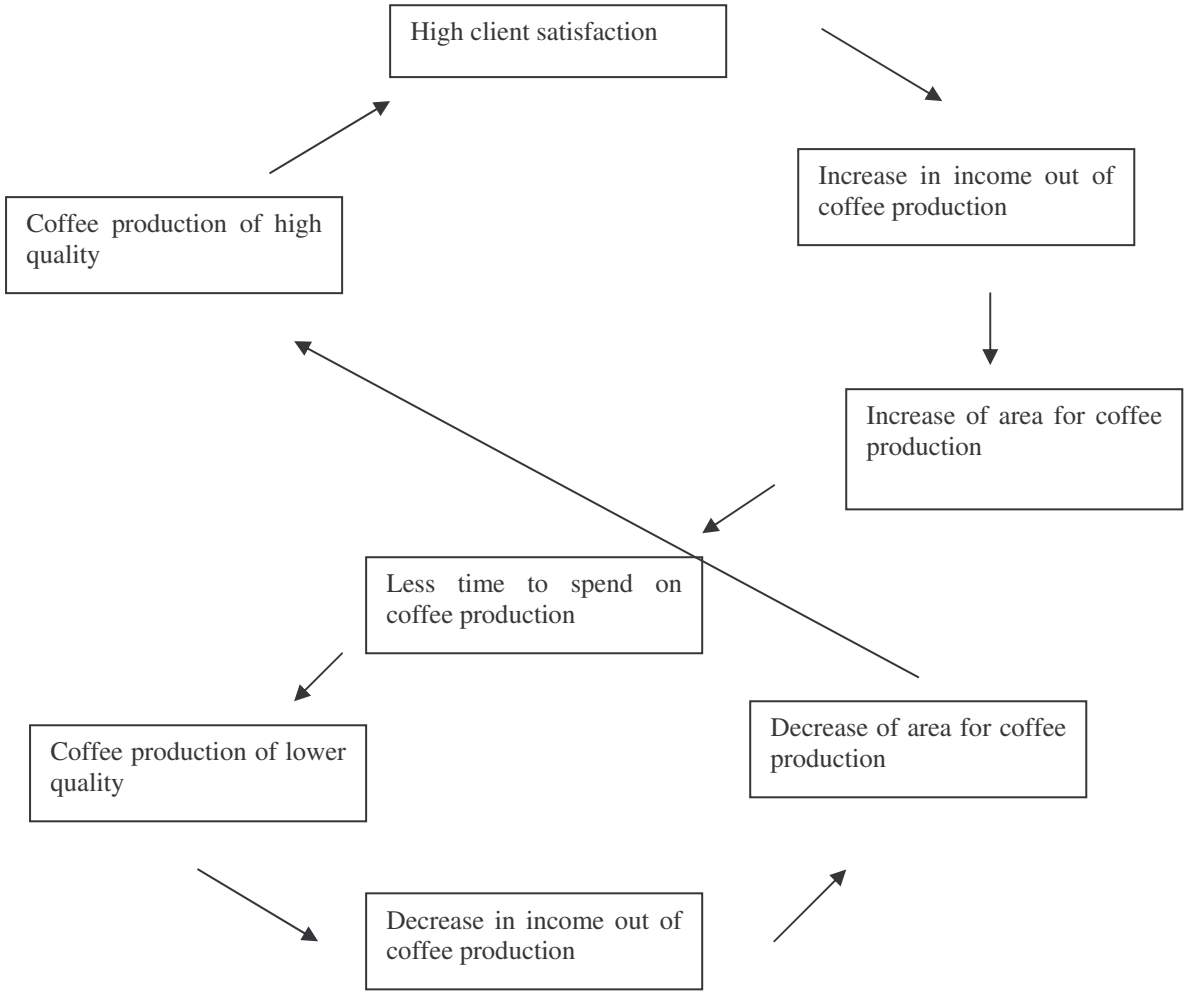


Figure 7: Example of a balancing loop

In the above mentioned example of a balancing loop, a monitoring system continuously assessing client satisfaction can be effective intervention to avoid an income decrease. However, to find out whether this intervention is useful to undertake, a cost benefit analysis should be carried out.

Exploring your problem in terms of typical combinations of reinforcing and balancing relationships provides a rich basis for discovering and formulating your leverage points.

Relevant questions and steps

1. Draw a loop for your main problem

2. What are the problems/causes/consequences in the loop to focus your interventions on?

3. What is the importance and urgency of these problems?

4. Formulate your major leverage points

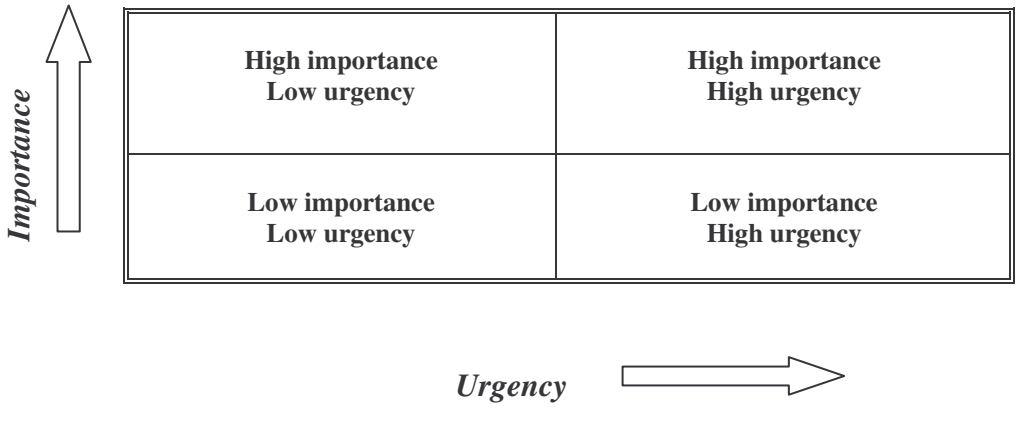
Step 1. Draw a loop for your main problem.

- Draw a loop for your main problem. Take for example 'decrease in client satisfaction'. Then tell a story by asking yourself "decrease in client satisfaction' turns into"… or "causes….. a decrease in coffee beans sale ". Then, you continue asking yourself " a decrease in coffee sale causes…. ….etc. Finally a loop can be drawn. It can become a balancing loop or a reinforcing loop

Step 2. What problems, causes, limitations or risks in the loop will be most relevant to focus your interventions on?

- Take the problems, causes, limitations drawn in the loop (step 1) and position them in table 3 according to 1) problems that are of high importance and low urgency; 2) the problems that are of high importance and high urgency; 3) problems that are not so important but very urgent; and, 4) problems that are not important and not urgent. Usually, a leverage point is to be found within problems of high importance a low urgency because leverage points are usually the more structural problems related to the rules of the system and, goals and mindsets on which the system is based.

Table 2: Importance and urgency of problems (Adapted from ODA, 1995)



- Choose the problem(s) that is (are) of high importance and not urgent as your leverage point(s). Which of these leverage points is/are the most important one for you to continue focus the diagnosis on?

Synthesis: What is my major leverage point? (Figure 8)

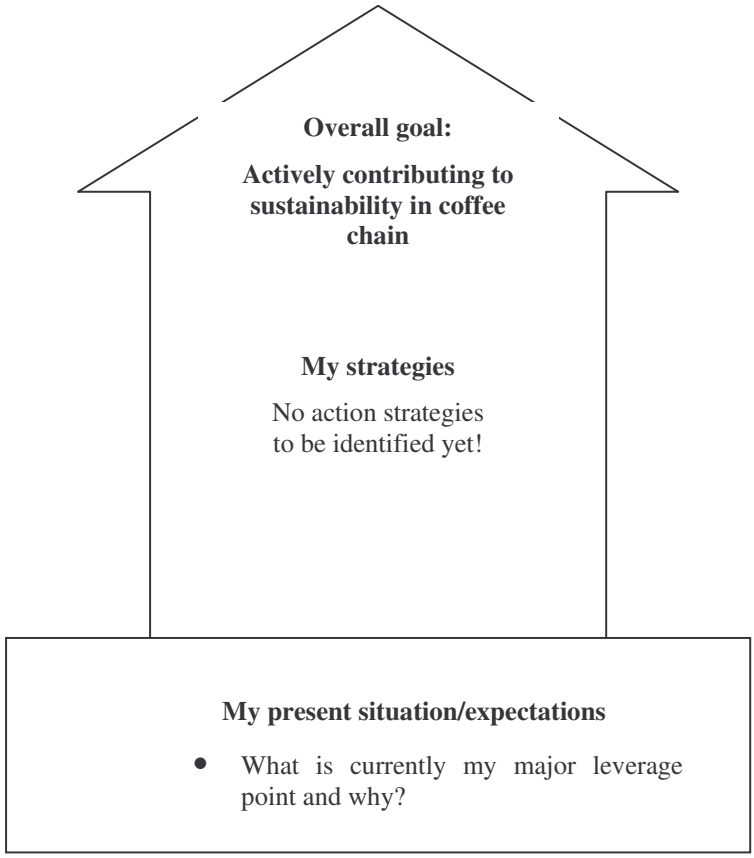


Figure 8: My major leverage point

Technique "Environmental influences"

What are external policy factors that influence the management of my leverage point? What are enabling policies and what are limiting policies and regulations?

Validity

Looking at the environment of your leverage points and that of the coffee chain itself can broaden your view on the limiting and enabling environmental conditions for your leverage point. If consider the context surrounding your leverage point, you will find out that your leverage point is strongly influenced by external factors such a policy factors, environmental factors or climate, which you can hardly influence yourself. This tool limits itself to external policy factors behind which various policy actors operate.

Figure 9 shows a policy environment of an agro-food chain and an example of a leverage point.

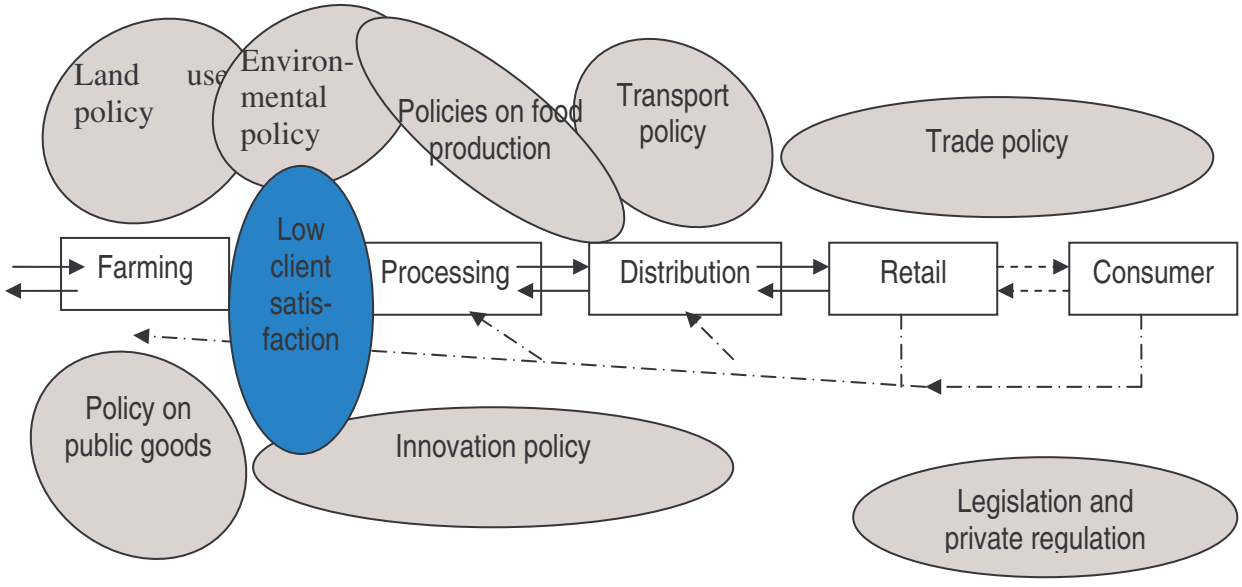


Figure 9: An example of an agro-food chain and its policy environment

Relevant questions and steps

1. Which policies play an important role in your leverage point(s)?
   - Consider policies at chain level, national and international level
   - Consider policies on public goods, safe food production, transportation etc.
2. What are these policies expected to do? What policies can be considered enabling factors and which policies constraining factors and why?
3. Which legislation and private regulations are of relevance for your leverage points? Which do you consider enabling factors and which limiting factors?

Use table 3 to document your answers to questions 1-3.

Table 3: External policy factors enabling or constraining the management of my leverage point

	Enabling policies and why?	**Constraining policies and why?**	**Enabling legislation/ Private regulations (and why?)**	**Constraining legislation/ Private regulations (and why?)**
Your leverage point				

- Do the constraining policy and legal factors prohibit any intervention on your leverage point? If yes, is there need to change your already chosen leverage point?

Syntheses: External policy factors and eventually a new formulation of my leverage point (figure 10)

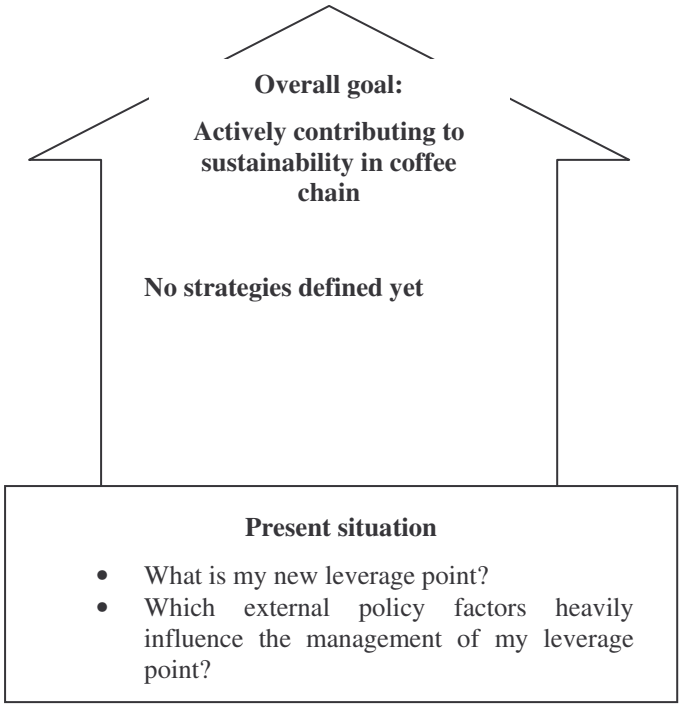


Figure 10: External policy factors and eventually a new formulation of my leverage point

Phase B: Searching strategies to improve your relationships and position for coming to grips with your leverage point

Phase B of the assessment tool assists in finding strategies for improving coping with the leverage point you have already identified in phase A. Phase B starts with assessing your current capabilities to manage your leverage point(s). It also next assists you to look at your connectivity with other actors. As such it helps you in finding what actions you could undertake to improve your relationships as a way to come to grips with your leverage point.

Achieving sustainability in the coffee chain is a difficult task for an individual actor as it likely to exceed your own capacity. An improvement process may require the combination of individual competencies, activities and/or functions. This implies that your relationships with others are an important asset in the change process. These relationships can have a different nature, for example long-term relationships focusing on partnership or arm's length relationships related to transactions and negotiations. Phase B provides techniques to help you to systematically assess your relationship with the other actors relevant to your leverage point.

Central questions in phase B:

- **To what extent are you capable to manage your leverage points?**
- **Who are important actors for you considering the management of your leverage point?**
- **How do these actors relate to each other and what is your position in it? (coalitions, conflicts, co-ordination)**
- **How do you value your relationship with the actors relevant to your leverage point?**
- **Which type of information is important to you for improving the management of your leverage point?**
- **How do you acquire the information that you need for improving the management of your leverage point?**
- **How can you improve your position in the network to improve your capabilities to manage your leverage point?**

In phase B, these questions will be addressed with use of the following techniques:

- Assessment of capabilities to manage your leverage point
- Actor identification
- Actors' influence and importance matrix
- Venn diagram

Technique "Assessment of capabilities to manage your leverage point"

Analyzing the extent to which you are capable to manage your leverage point

Validity

Your leverage point is the most effective point of change or intervention towards sustainability. At your leverage point you can expect the use of resources or the implementation of changes to have to largest effect. This technique helps you to look what your capability to manage your leverage point(s) as a basis for looking how to increase your influence on these points?

Relevant question and step

1. To what extent are you capable to manage your leverage point(s) at present?

Step 1: To what extent are you capable to manage your leverage point(s) at present?

Use table 5 to document your answers. Use your leverage point identified in phase A.

Table 4: Leverage point and an assessment of your capabilities to cope with it at present

Identified leverage point	**How do you cope with it?**	**Do you copy with it satisfactory?**	• **If not, hat should be also done or what should be done differently?** • **Who do you need to realize this?**

Syntheses: Your strategies to improve your capability to cope with your leverage point (figure 11)

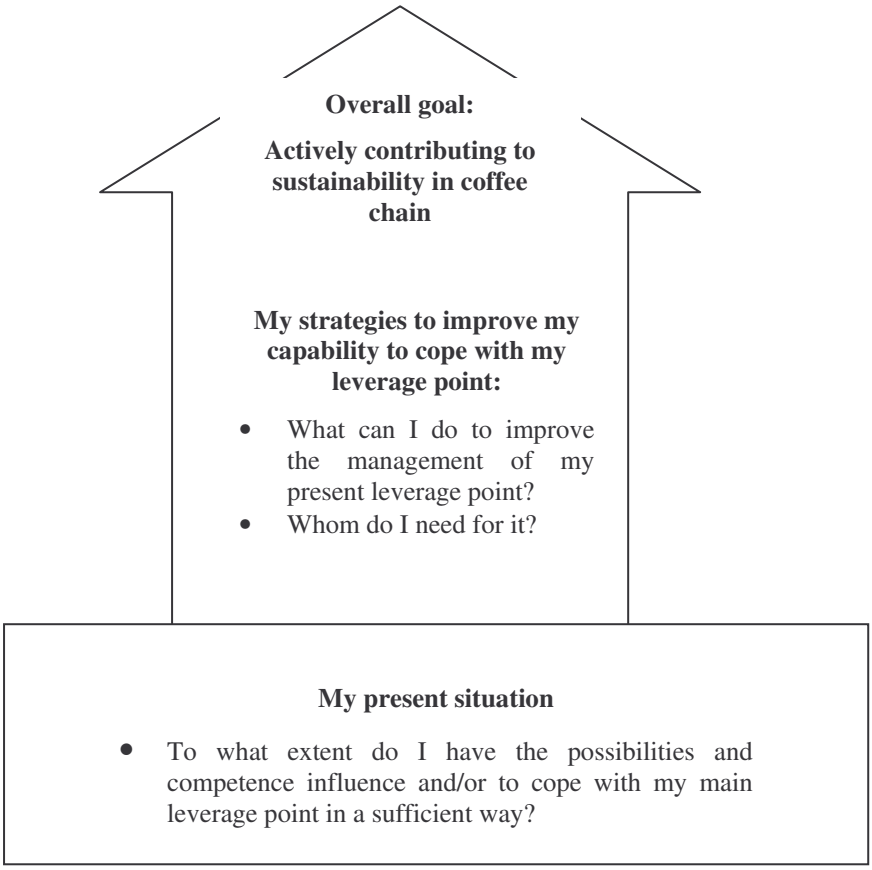


Figure 11: **My strategies to improve my capabilities to cope with my leverage point**

Technique "Actor identification"

Which actors are important for you to improve the management of your leverage point?

Validity

Looking at the actors who are important for coping with your leverage point brings clarity and transparency to the process of finding out who are the key actors in relation to your concerns. It helps you to make a first assessment of the relative importance of the different actors for you. Moreover, it assists you in identifying lacking parties.

Relevant questions-steps

1. Which actors play an important role in your leverage point and why? And, specify the actors playing a role in the management of your leverage point.
2. Which party should play a role, but is not yet involved? And, what could you do to involve the missing parties?

Step1: Which actors play an important role in your leverage point and why?

Which actors play a role in the management of your leverage point and why?

- Use table 6 (columns 1, 2, 3 and 4) to document your answers.
- Try to be as specific as possible (e.g. colleague coffee producers are not a homogenous category).

Table 6: Actor identification

Actors who play an important role in your leverage point	**Why is this actor important?**	**Actors who play an important role in *managing* your leverage point**	**Why is this actor important?**	**Which parties are still missing? What to do to involve them in the management of you leverage point**
1. Name	(reason)			
2. Etc.				

Step 2: Which party should play a role, but is not yet involved? And, what could you do to involve the missing parties? Use table 7 (column 5) to document your answers

Synthesis: 1) Which actors are important for coping with my leverage point?

2) What to do to involve relevant parties who are not yet involved?

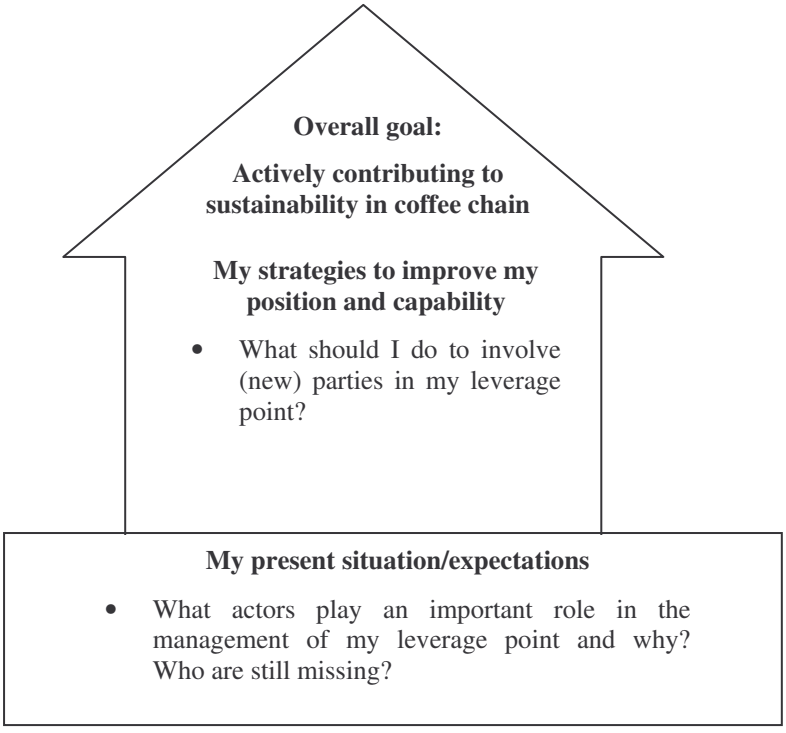


Figure 12: Strategies for building new relationships with parties in order to improve my position and capacity to manage my leverage point

Technique "Actors' influence and importance matrix"

Your influence on your leverage point in relation to the influence other actors have on your leverage point

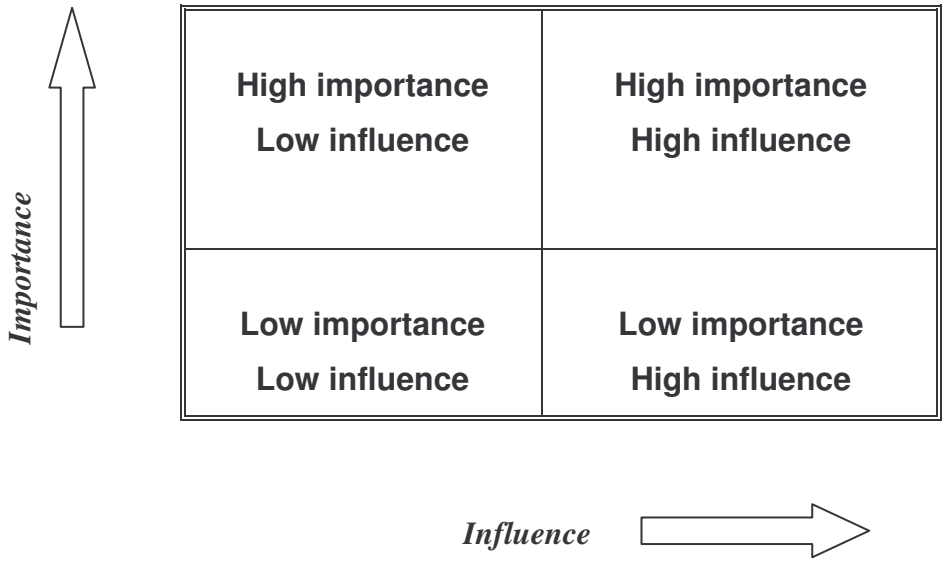
Validity

This technique focuses on actors' power, influence and importance. Looking at the actors' power, influence and importance brings clarity to the process of finding out who are the actors who are important for your leverage point and who have the power (orv even too much power) the act upon it. It also helps to clarify your own position in the network in relation to that of others. The insights help you to decide on strategies for increasing your own importance and influence in your leverage point by building relationships with other influential and /or important actors or by decreasing the influence of others.

Relevant questions-steps

1. Use table 7 to position: 1) the actors who are very important for you leverage point and very influential, 2) the actors who are very important but not influential; 3) actors who are not so important but very influential and 4) actors who are not important and with less influence. An actor can be influential because of for example money, knowledge, access to resources or possessing resources. An actor can be important because of being an intended target group.

Table 7: Actors' influence and importance matrix (ODA, 1995)



2. Position your self in the matrix
3. Position the actors you have already identified using the technique 'actors identification'
4. Which changes would you prefer regarding the position of the actors and/or that of yourself for improving the management of your leverage point
5. What can you do to realise these changes and who do you need for that? (new relevant parties can become visible)

Synthesis: **What is my current influence on my leverage point in relation to that of other actors? And what can I do to improve my influence on my leverage point? (Figure 13)**

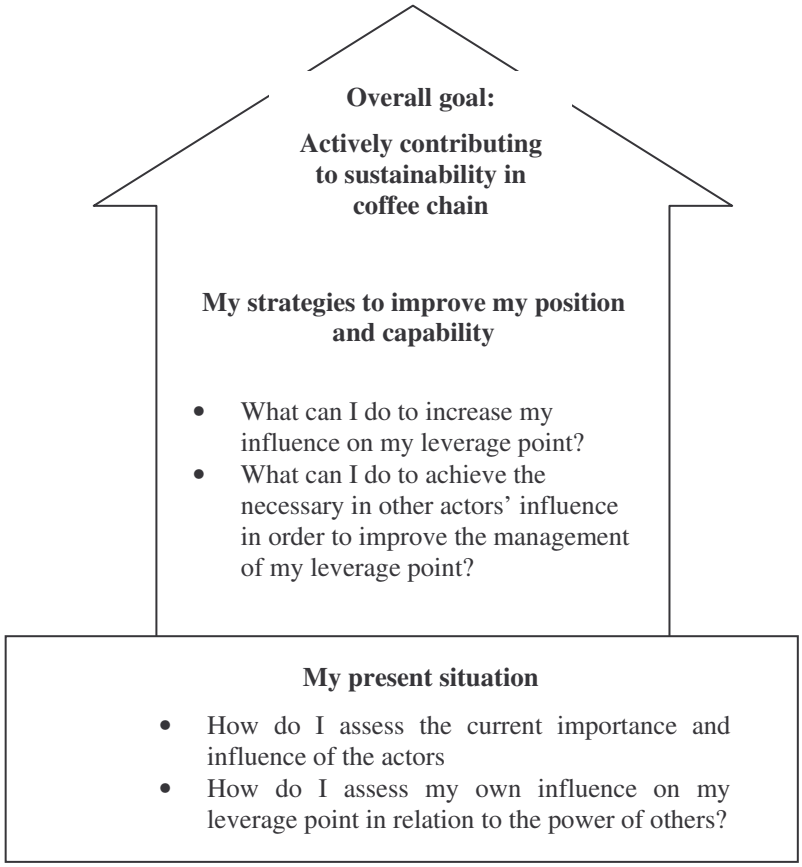


Figure 13: **Strategies to become more influential as a way to improve the management of my leverage point**

Technique "Venn diagram"

With whom do you relate and how important are these actors for you?

Validity

The Venn diagram helps you to visualize the extent to which you interact with other stakeholders and to assess the relative importance of each relationship. The technique makes you also looking at the quality of each relationship in the light of the need for improving relationships for successful managing your leverage point. As such it helps you to decide on new strategies for improving relationships and/or building new coalitions.

Relevant questions and steps

- Consider the already identified actor and represent each of the stakeholders with a separate circle. Make a circle of your self as well and place it in the centre. You make circles of paper or just by drawing. The size of the circle is critical. The larger the size the more important the stakeholders is for your leverage point. Moreover, the closer the circles are the more or better interaction there is (see figure 14). Overlapping circles means organisations/people with shared functions. A small circle within a larger circle represents a unit in a larger organisations/group.

- For each relationship between you and another organisation determine: what is the linkage about and assess the quality of the relationship (strong, weak or moderate). Use table 10 to document your answers.

  To assess the relationship you can use various criteria such as:
  - Frequency or intensity of contact
  - Formal or informal contact
  - One way or two way contact
  - Timeliness of service provision
  - Extend to which goals, expectations and/or values are in line
  - Accessibility of the (service) organisation
  - Appropriateness of communication (media) used

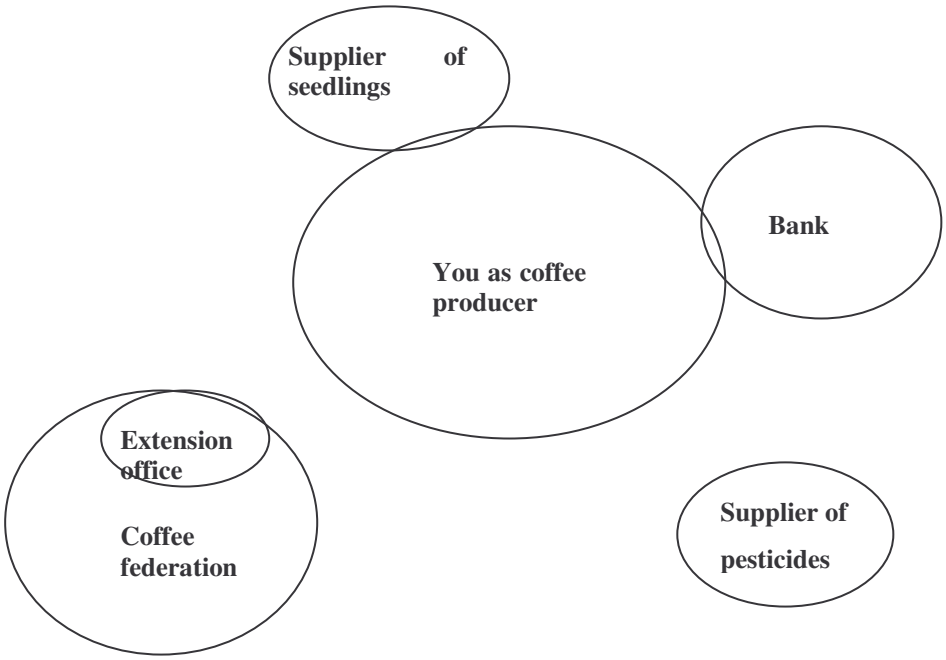


Figure 14: The extent to which you interact with other stakeholders and the relative importance of these relationships to you (example of a Venn diagram)

Table 9: Relationships between you and other actors and an assessment of these relationships

		Actor 1	Actor 2	Actor 3	Actor 4
You yourself	What is the relationship about? (e.g. sell –buy)				
	Assessment of the relationship (poor, moderate, good) and the reasons why				
	What activities can you undertake to improve important relationships?				

- Do you discover coalitions among actors? If there are any, are you part of it? If not, do you need to become part of one or more coalitions?
- With whom do you need to build new relationship in order to improve the management of your leverage point?

Synthesis: **What strategies do I need to carry out to improve my connectivity to other actors as a way to manage my leverage point more successfully? (Figure 15)**

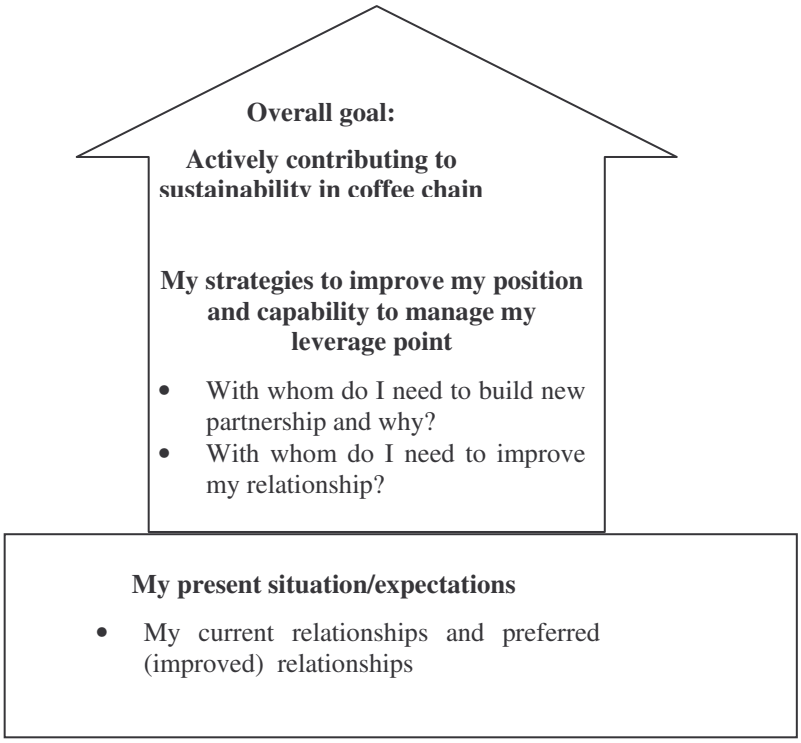


Figure 15: Strategies to improve my connectivity to other actors

Technique "Information –source use sheet"

- **Which type of information is important to you for improving the management of your leverage point?**
- **Are you able to acquire the information you need to handle your leverage point?**

Validity

For the management of leverage point, information is usually an important production factor. Information is provided by information or knowledge sources. The "Information –source use sheet" helps you to discover the most preferred information sources for each type of information. It also assists you in finding out about information that is not accessible at all.

Questions and steps:

1. What sources of information do you use regularly?
2. What type of information do you need to successfully cope with your leverage point? And, what are the 'top five' most important sources used by you?
3. What type of information you need is not made available to you in a satisfactory way by (one of) the sources?

Step 1: What sources of information do you use regularly?

- Think of newspapers, colleagues, bank etc. Add sources of information to those already mentioned in the first column of table 12..

Table 12: Sources of information

Type of information **Information source**						
Trade journals						
Technical/ICT journals						
Policy makers						
Coffee growers						
Books						
Internet						
Newspaper						
Courses						
Policy makers						
Lawyers						

Step 2. *What type of information do you need to successfully cope with your leverage point?*

Add the types of information you need to those already mentioned in the first row of table. 12. Examples of types of information that might be relevant are: policy information, client information etc.

Table 13: Types of information – source use

Type of information **Information source**	**Technical information**	**Market information**	**Policy information**	**ICT information**	**Information on consumer behaviour**	
Trade journals	Never	Always				
Colleagues	Etc.	Etc.				
Policy makers						
Trade journals						
Technical/ICT journals						
Coffee growers						
Books						
Internet						
Newspaper						
Courses						
Policy makers						
Lawyers						

- Complete the matrix by scoring which sources you use for what type of information (always, sometimes, never). Use table 13 to document your answers.
- What are the 'top five' most important sources used by you?

Step 3. What type of information you need is not made available to you in a satisfactory way by (one of) the sources?

- Is there any type of information you need that is not made available to you in a satisfactory way by (one of) the sources? Which new source can or should provide this type of information? What actions should you carry out to make sure you will acquire the

necessary information (e.g., Does this new source of information imply that you need to develop or improve a new relationship?). Use table 14 to document your answers.

Table 14: Missing relevant information

Types of information missing	Who could/should provide this information	What actions can you undertake to make sure you will acquire the necessary information in a satisfactory way

Synthesis: My action strategy to ensure the acquirement of all necessary information in order to management successfully my leverage point (Figure 16)

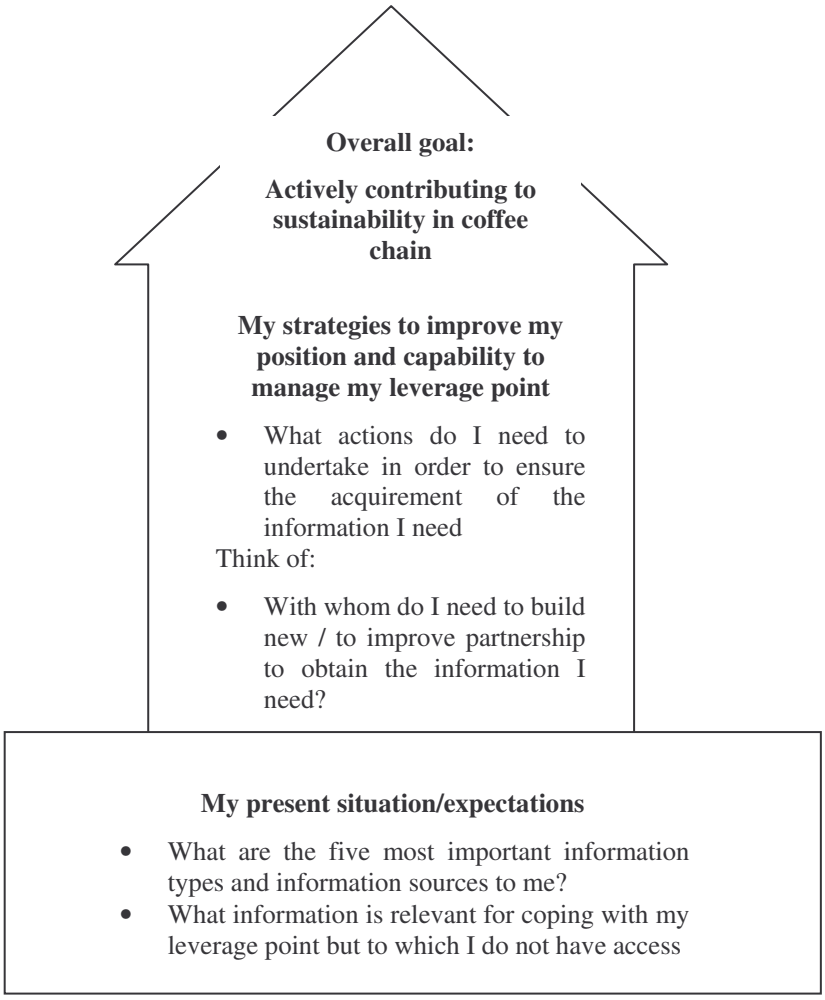


Figure 16: Strategies to adapt to new conditions and to make change to happen

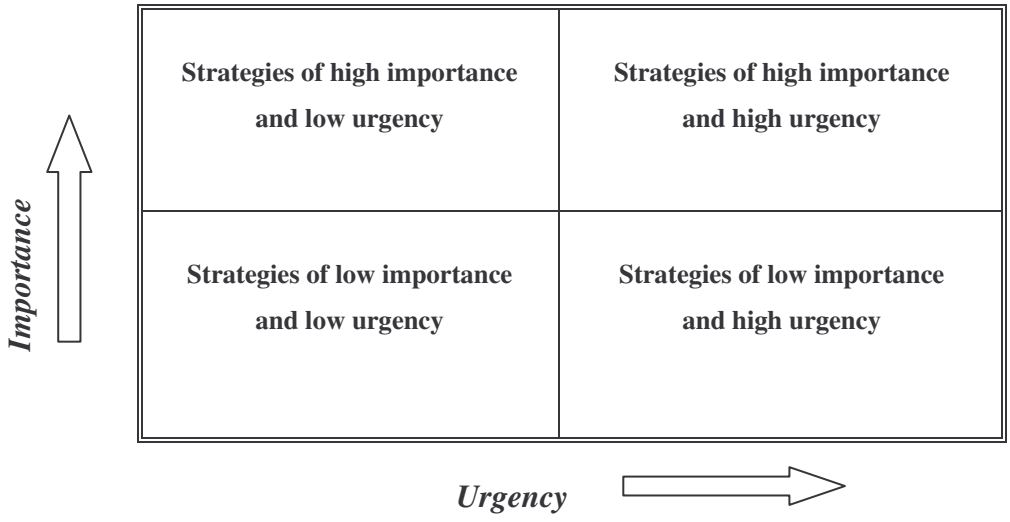
Your action strategy and priorities to improve you position and capabilities to come to grips with your leverage point more successfully

Phase B has assisted you in formulating strategies that help you to come to grips with your leverage point more successfully. More specifically, at this stage you have formulated:

- Your strategies to develop new relationships
- Your strategies to improve existing relationships
- Your strategies to increase your influence on your leverage point (or to decrease the influence of other actors)
- Your strategies to ensure the acquirement of the necessary information that you need for managing your leverage point

Next, as you will probably not be able to implement all strategies at the same time and some actions are more urgent and/or important the others, table 15 helps you to set priorities and to put your strategies in sequence.

Table 15: Importance and urgency of strategies (Adapted from ODA, 1995)



- Take all strategies you have formulated in phase B and position them in table 15 according to 1) strategies that are of high importance and low urgency; 2) strategies hat are of high importance and high urgency; 3) strategies that are not so important but very urgent; and, 4) strategies that are not important and not urgent.
- What are the five strategies / or actions you will start to carry out

Table 16: Top 5 of the strategies /actions that I will start to carry out to manage my leverage point more successfully

Top 5: Strategies /actions that I will start to carry out?
1.
2.
3.
4.
5.

- To what extent are the above mentioned strategies effective to anticipate the growing demand for sustainability in the coffee chain?

  Is there any need to change your top 5 of the strategies /actions that I will start to carry out?

  If yes , which changes do you need to make and why?

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